15 Cents a Copy

The OIL and GAS JOURNAL

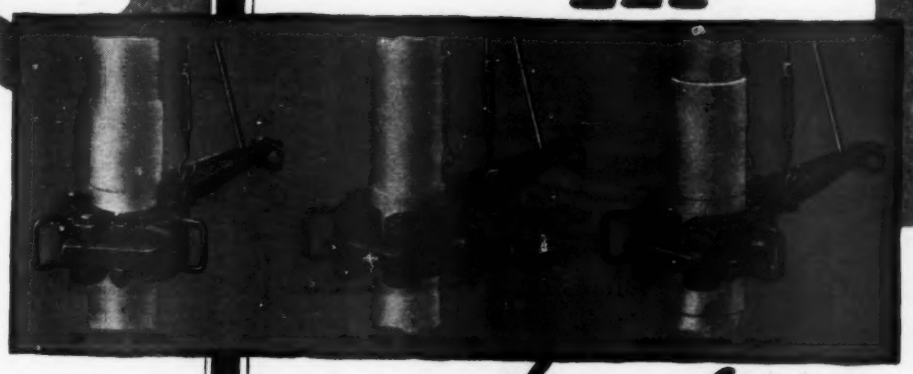
PRODUCING REFINING MARKETING

Published Every Thursday TULSA, OKLAHOMA, JULY 22, 1926 $6.00 a Year

Davis Paul H
D482-U—3-23-27R
Room 819 39 South La Salle St.

It's a Wilson

3 tongs in 1



drop-forged

Wilson 2-Step Spring-Latch Rotary Tongs

Just like paying for only one tong and getting the work of three. They are simplest. You don't have to unhook them. One tong size takes pipe, coupling or tool joint without any adjustment whatsoever. When unlatched they swing clear of the pipe. Positively the most convenient tongs to handle. They save time, protect the pipe, assure greatest safety and lower drilling costs.

Drop-forging permits of greater strength. We furnish rotary tongs, drop-forged, in several sizes.

ASK FOR TONG CATALOG

Wilson Oil Tools Corporation
DISTRIBUTORS FOR
Wilson & Willard
MANUFACTURING COMPANY
Factory and Distributor's Office It's a Wilson 2301 East Vernon Ave.
Los Angeles, Calif.
SALES OFFICES:
FT. WORTH, TEXAS

Advertisers' Index on Page 25

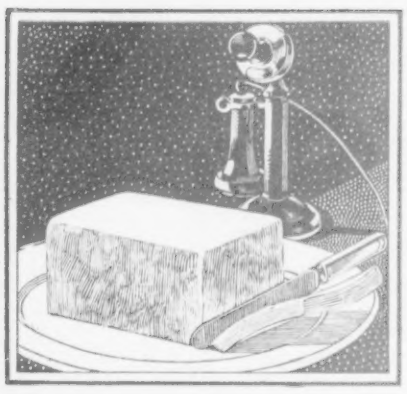
Table of Contents on Page 26

Business slumped

Then LONG DISTANCE *sold*

$67,000

WORTH OF BUTTER



THE BUTTER market was in that condition dreaded in every business. Orders had fallen off. Hardly a buyer could be found who would purchase outright; the most that was offered was to take the product on consignment. Then it was that a St. Louis wholesale house turned to the telephone. Their answer to the slump was a campaign of long distance calls, and this one drive sold *outright* $67,000 worth of butter!

"We wish to thank your representative for his aggressiveness," writes this St. Louis concern. "He talked selling by Long Distance until we were convinced."

There is no more effective answer to slumping business than a campaign of long distance calls. They enable you to concentrate weeks of travel into days of intensive, effective work. Your campaign can be transferred at will, and almost instantly, from one trade territory to any other in any part of the country. Long distance solicitations restore confidence and make good-will. They find what you want to buy. They make sales. They do all the most persuasive human voice can do, and add to it country-wide range. Do you know from experience how your sales may be speeded up, how slumps may be prevented in advance by telephone? Have your important men been trained in the essentials of telephone selling and buying? If business should slow down, do you know how long it would take to establish telephone contact with important customers in every state in the Union?

The Commercial Department of the local Bell company will gladly make a free study of the productive telephone opportunities in your business. In the meantime, the telephone on your desk will connect you with anyone wanted in 70,000 towns and cities. What distant concern would it be to your profit to talk to, now? . . . . . *Number, please?*

BELL LONG DISTANCE SERVICE

XUM

The ADVERTISERS' INDEX

A

Acme Fishing Tool Co.
Air Cleaning & Reaming Corp.
Ajax Iron Works
Ajax Rope Co.
Aluminum Co. of America
American Appraisal Co. 147
American Asphalt Paint Co. 114
American Cable Co. 16
American Car & Foundry Co.
American Mfg. Co. of Texas
American Radiator Co.
American Roller Bearing Co. 126
American Rolling Mill Co.
American Schaeffer & Budenburg Corp.
American Sheet & Tin Plate Co.
American Spiral Pipe Works 129
American Telephone & Telegraph Co. ....Inside Front Cover
American Well Works
Anderson & Anderson 107
Anderson, Carl B. 110
Andrews Steel Co. 152
Arbon, Paul & Co.
Arco Company, The
Armstrong Bros. Tool Co. 172
Askania, Werke, A. G.
Athey Truss Wheel Co. 103
Atlas Ball Co.
Auer, C. A.
Austin Co.
Axelson Machine Co. ....Back Cover

B

B. & A. Specialty Co.
Baash-Ross Tool Co.
Babcock & Wilcox Tube Co., The
Baker Casing Shoe Co.
Baldwin Chain & Mfg. Co. 12
Barber-Greene Co.
Barnickel, Wm. S., & Co. 93
Barnsdall Refining Co.
Bartlesville Supply Co. 102
Beaver Mfg. Co.
Belle City Mfg. Co.
Bessemer Gas Engine Co. 17
Bignall & Keeler Machine Works
Binks Spray Equipment Co. 129
Black Steel & Wire Co.
Blackmer Pump Co.
Blaw-Knox Co.
Borden Co. 126
Botfield Refractories Co.
Bovaird & Seyfang Mfg. Co. 119
Bovaird Supply Co., The
Braden Co.
Brady Conveyors Corp.
Braun, C. F., & Co.
Bridgeport Machine Co. 88-89
Bristol Co. 112
Broderick & Bascom Rope Co. 9
Brokaw, Dixon, Garner & McKee 107
Brooks Engineering Corp. 8
Brown, Arthur C. 110
Brownell Co.
Brown Instrument Co.
Brown & Thomsen 108
Brown Tool Co., Inc
Bruce-MacBeth Engine Co.
Buckeye Traction Ditcher Co.
Buda Co.
Buffalo Gasolene Motor Co.
Burns Tool Co.
Burt Corporation
Burt Mfg. Co.
Busch-Sulzer Bros. Diesel Engine Co.
Butler Mfg. Co. 113
Byers, A. M., Co. 18
Byron Jackson Pump Mfg. Co., Inc.

C

Campbell, J. A.
Canadian Pacific Railway Co.
Carbondale Machine Co. 92
Caudill, Samuel J. 110
Celite Products Co.
Central Forging Co.
Central Steel Co.
Central Tube Co. 128
Chain Belt Co.
Champion Machine & Forging Co.
Chaplin-Fulton Mfg. Co. 128
Chapman Valve Mfg. Co.
Chestnut & Smith Corp. 83
Chicago Bridge & Iron Works
Chicago Pneumatic Tool Co.
Chicago Steel Foundry Co.
Chisholm-Moore Mfg. Co.
Clapp, Frederick G. 110
Clark Bros. Co.
Clark, Robert W. 107
Classified Wants 132-133
Cleveland Tractor Co.
Climax Engineering Co. 123
Coatesville Boiler Works
Columbian Rope Co.
Columbian Steel Tank Co.
Columbus Forge & Iron Co.
Columbus Sucker Rod Co.
Continental Motors Corp. 81
Continental Supply Co. 61
Cook Paint & Varnish Co.
Cooper, C. & G., Co. 75
Cox & Sons Co., The
Crane Co. 24
Crane Packing Co.
Crown Central Petroleum Corp.
Cross Engineering Co.
Cushing, Tim, Tool & Supply Co.

D

D. & B. Pump & Supply Co. 109
D. & N. Specialty Co.
Darling Valve & Mfg. Co. 23
Dart, E. M., Mfg. Co.
Davis, G. M., Regulator Co. 108
Dayton Pipe Coupling Co.
Dearborn Chemical Co.
De La Vergne Machine Co.
Delta Electric Co.
Detroit Graphite Co.
Diamond Drill Carbon Co. 154
Dixon, Joseph, Crucible Co. 124
Dodge Mfg. Co.
Donovan Boiler Works, Inc. 80
Dresser, S. R., Mfg. Co. 35
Dunn Mfg. Co.
DuPont De Nemours & Co., Inc., E. I.
Durabla Mfg. Co.

E

Eagle-Picher Lead Co. 3
Earnshaw, G. W. 107
Eastern Torpedo Co. 172
Eclipse Paint & Mfg. Co.
Edward Valve & Mfg. Co.
Elliott Core Drilling Co.
Empire Refineries, Inc
Emsco Derrick & Equipment Co.
Equitable Meter & Mfg. Co.
Eureka Burner Co.

F

Fairbanks-Morse & Co.
Farley Machine Works Co.
Federal Supply Co. 99
Fenwick-Reddaway Mfg. Co.
Fisher Governor Co.
Foamite-Childs Corp.
Fohs, F. Julius 108
Foos Gas Engine Co.
Ford Chain Block Co. 116
Ford Motor Co.
Fort Worth Laboratories 110
Foxboro Co., Inc., The
Franklin Valveless Engine Co. 85
Frick-Reid Supply Co. 20
Full Crawler Co.

G

Gardner Governor Co. 115
Garlock Packing Co.
Gasoline Recovery Corp. 124
Gaso Pump & Burner Mfg. Co. ....Inside Back Cover
General American Tank Car Corp.
General Insulating & Mfg. Co.
General Motors Truck Co.
General Oil Tools Co.
Gilbert & Barker Mfg. Co.
Gilfillan Machine Works 129
Gomory, W. L. 107
Goodrich, B. F., Rubber Co.
Goodyear Tire & Rubber Co. 5
Gott, H. P., Mfg. Co. 128
Goulds Pumps, Inc.
Graham Brothers 19
Graver Corp. 139
Greenspon's, Joseph, Sons Iron & Steel Co. 118
Griscom-Russell Co. 123
Gulberson Corp. 43
Gulf Refining Co.

H

Halliburton Oil Well Cementing Co. 11
Harrisburg Pipe & Pipe Bending Co.
Hazard Mfg. Co. 47
Heppenstall Forge & Knife Co.
Herald Brothers 107
Hercules Motors Corp.
Hercules Tool Co.
Heydrick Mapping Co. 110
Hill, Hubbell & Co. 86
Hills-McCanna Co.
Hinderliter Tool Co.
Homestead Valve Mfg. Co.
Hood, H. H. 107
Hoover Steel Ball Co.
Hope Engineering & Supply Co.
Hopkins, Edwin B. 108
Hough, Charles N., Mfg. Co. 112
Houston Pump & Supply Co.
Hoyt Metal Co.
Hughes Tool Co. 73
Humble Oil & Refining Co.
Hunt, Robert W., Co. 154
Huntley & Huntley 110

I

Illinois Glass Co.
Imperial Belting Co.
Imperial Royalties Co.
Ingersoll-Rand Co.
International Derrick & Equipment Co. 68-69
International Harvester Co. of America. 91
International Supply Co.
Iron King Mfg. Co. 119

J

Jarecki Mfg. Co.
Jefferson Union Co.
Johns-Manville, Inc 87
Jones, S. M., Co. 101-130

K

Kansas City Hay Press Co.
Kaw Steel Construction Co. 15
Kellogg, M. W., Co. 49
Kelly, John Eoghan 108
Kelly-Springfield Tire Co.
Kennedy Valve Mfg. Co.
Kerotest Mfg. Co.
Kerr, John B. 108
Keuffel & Esser Co.
Kewanee Boiler Co. 2
Key Boiler Equipment Co. 110
Kirk & Hoover 110

L

Landis Machine Co.
Larkin & Co.
Layne & Bowler Co.
Leidecker Tool Co. 97
Leschen, A., & Sons Rope Co.
Linde Air Products Co. 1
Link-Belt Co.
Longyear, E. J., Co. 108
Lucey Mfg. Corp.
Ludlow Valve Mfg. Co.
Lufkin Fdy. & Machine Co.
Lufkin Rule Co.
Lunkenheimer Co.
Lyons, Thomas D. 172

Mc

McCord Radiator & Mfg Co. 124
McGregor Working Barrel Co.
McIntosh & Seymour Corp.
McJunkin Supply Co.
McKee, Arthur G., & Co.
McNutt, V. H. 108

M

Magnolia Petroleum Co.
Maloney Tank Mfg. Co. 100
Manzel Bros.
Marion Machine Foundry & Supply Co. 106
Marsh Gauge Pole Co.
Mathieson Alkali Works, Inc.
Matson, George C. 108
Matthews, W. N., Corp.
Maverick, Phillip 107
Meier, E. C. Lubricating Co.
Merco Nordstrom Valve Co.
Messimer, H. H. 108
Metric Metal Works
Midwest Piping & Supply Co.
Miller Improved Gas Engine Co.
Miller, Max B., & Co., Inc.
Mineral Exploration Co.
Mine Safety Appliance Co.
Moon Mfg. Co.
Moore, Lee C., & Co., Inc. 41
Mosier Metal Products Corp.
Munn & Co. 110
Murray Rubber Co.
Murray Tool & Supply Co.
Myers, F. E. & Bro. Co. 131

N

National Carbon Co., Inc 1
National Gas Products Corp.
National Lead Co. 111
National Petroleum Engineering Corp. ..130
National Petroleum Marketers Assn.
National Pigments & Chemical Co. 122
National Supply Co. 71
National Transit Pump & Machine Co. 82
National Tube Co.
National Turnbuckle Derrick Co.
Newton Process Mfg. Co. 33
Norris Bros., Inc.
Norris, W. C.
North American Car Co. 130
Northern Fire Apparatus Co.
Northern Oil Information Bureau 110
Northrup Equipment Co.
Nuttall, R. D., & Co. 117
Nye Tool & Machine Works 7

O

O'Brien Steel Construction Co. 118
Ohio Steel Foundry Co.
Oil Conservation Engineering Co. 21
Oil Country Specialties Mfg. Co. 76-77
Oil Insurance Association
Oil Well Supply Co. 52-53
Oklahoma Steel Casting Co.
Oxweld Acetylene Co. 1

P

Parkersburg Machine Co.
Parkersburg Rig & Reel Co. 131
Partrige-Scotford Stamp & Stencil Co. 130
Patrick, R. S. 117
Pattin Brothers Co. 120
Penberthy Injector Co.
Petroleum Appliance Co.
Petroleum Iron Works 63
Pforsheimer, Carl H., & Co.
Pickering Governor Co.
Pittsburg Boiler & Machine Co.
Pittsburgh-Des Moines Steel Co.
Pittsburgh Meter Co. 110
Pittsburgh Steel Products Co. 55
Plymouth Cordage Co.
Porter & Co.
Powell, William, Co.
Power Mfg. Co.
Power Piping Co. 90
Power Plant Equipment Co.
Power Specialty Co. 13
Prescott Co., The
Prest-O-Lite Co., Inc., The 1
Progressive Brass Mfg. Co.
Pure Oil Co. 67
Pyle-National Co. 98

R

Ranney Oil Mining Co. 108
Ratigan, J. P., Co.
Reading Iron Co. 4
Reading Steel Casting Co., Inc.
Reed Roller Bit Co. 57
Regan Forge & Engineering Co. 64
Reid, Joseph, Gas Engine Co. 94
Republic Flow Meters Co.
Republic Iron & Steel Co.
Republic Supply Co.
Rich, John L. 110
Ring, DeWitt T. 107
Riter-Conley Co. 154
Robinson, A.
Roots, P. H. & F. M. Co.
Ross Heater & Mfg. Co., Inc
Ross-Meehan Foundries 154
Ryerson, Joseph T., & Sons 154

S

Safety Pulling Machine Co.
Sargent Engineering Corp., The
Shaffer, J. E., Co.
Shaffer Tool Works
Sharples Specialty Co.
Shaw, S. F.
Sheffield Steel Corp. 84
Sherwin-Williams Co.
Shippers' Car Line, Inc.
Simplex Equipment Co.
Sinclair Refining Co. 145
Sivyer Steel Casting Co.
Skelly Oil Co.
Smith, A. O., Corp.
Smith Separator Co. 79
South Chester Tube Co.
Southern Cornice Works
Southwestern Engineering Corp.
Southwestern Engineering Co., Inc.
Spang & Co.
Spang, Chalfant & Co., Inc 10
Spence Machine Co. 130
Spencer Trailer Co.
Stalder, Walter 108
Stanley Belting Corp.
Star Drilling Machine Co.
States Engineering Co., The 122
Stearns-Roger Mfg. Co.
St. Louis Surfacer & Paint Co.
Strom Steel Ball Co. 96
Sullivan Co., The
Sullivan Machinery Co.
Superior Tube Co.

T

Templeton, Kenley & Co., Ltd.
Texas Pacific Coal & Oil Co. 104
Texas Company, The 58-59
Timken Roller Bearing Co.
Titusville Forge Co.
Titusville Iron Works
Toledo Pipe Threading Machine Co. 125
Trimont Mfg. Co.
Trumble Gas Trap Co. 125
Truscon Steel Co. 105
Twin Disc Clutch Co.

U

United Alloy Steel Corp.
United Iron Works, Inc. 95
United States Cast Iron Pipe & Fdy. Co.
United States Rubber Co.
Universal Oil Products Co. 39
U. S. Tool Co. 22

V

Van Couvering, M. 107
Victaulic Co. of America
Vogt, Henry, Machine Co.
Volz Engineering Equipment Co.

W

Wall Rope Works, Inc. 107
Walsh & Weidner Boiler Co.
Walworth Co.
Warren Petroleum Co.
Waukesha Motor Co. 45
Westcott & Greis
Western Machinery Co.
Western Supply Co.
Westinghouse Electric & Mfg. Co.
Wheatley Brothers Machine Works 116
Wheeling Steel Corp.
White Co.
Wickwire Spencer Steel Co. 6
Wico Electric Co.
Widdell Engineering Co.
Williams, Herbert E. 107
Williams, J. H., & Co.
Williamsport Development Co.
Williamsport Wire Rope Co.
Williams Tool Corp.
Wilson Oil Tools Corp. ....Front Cover
Wilson Welder & Metals Co.
W-K-M Company, Inc.
Wood & Wood 108
Worthington Pump & Mach. Corp.
Wright, Harry F. 107
Wright Mfg. Co. 129

Y

Yale & Towne Mfg. Co.

Z

Zero Hour Torpedo Co.

WHAT AND WHERE TO BUY—PAGES 173-174-175

XUM

The Oil and Gas Journal

PRODUCING REFINING MARKETING

VOL. 25. NO. 9. TULSA, OKLAHOMA, JULY 22, 1926

Copyright, 1926, by The Petroleum Publishing Co.

TABLE OF CONTENTS

SPECIAL ARTICLES

Flush Output Greater Than Decline 27
By Andrew M. Rowley
New development offsets loss in older fields. Mid-Continent situation is somewhat better.

Refining With Panhandle Crude Oil 29
By C. O. Willson
Amarillo plant has many operation problems in low cold test and high sulphur content.

Geophysical Methods in Oil Finding 30-31
By Dr. C. A. Heiland
Principle and mode of operation of torsion balance described. Gives indications of geological character, not of oil.

Testing the Properties in Gasoline 32
By A. P. Bjerregaard
Differ markedly in importance of their influence on quality and use of motor fuel.

More Uses for Gasoline (Editorial) 34

Technical Questions Answered 36
By Dr. C. K. Francis

Geological Study of Creek County 78
By J. W. Merritt and O. G. McDonald

Rights and Liabilities of Joint Owners of Lease 105
By Lawrence Mills

Court Interprets Arkansas Lease 135
By Charles E. Kern

FIELD OPERATIONS

Late Fields 37

North Texas 38
By C. D. Lockwood

Texas Panhandle 40
By C. D. Lockwood

Louisiana-Arkansas 42
By James H. Dameron

Mexico 42
By George Blardone

Gulf Coast 44
By P. L. McGreal

Rocky Mountain Area 46
By Frank B. Taylor

Artesia, New Mexico 46
By Staff Correspondent

California 48
By L. P. Stockman

Oklahoma 50
By J. L. Dwyer

East Central Texas 50
By Special Correspondent

Kansas 51
By J. L. Dwyer

Southwest Texas 54
By B. D. Stevenson

San Juan Basin, New Mexico 54
By Special Correspondent

Canada 56
By Victor Lauriston

Pennsylvania-West Virginia 60
By D. S. Wakenight

Michigan 37-60
By Whit

Central West 62
By Whit

Kentucky-Tennessee 62
By Whit

REFINING AND MARKETING

Nearly All Refined Products Strong 28
By Neil Williams
Gasoline, kerosene, fuel and gas oil prices advanced as demand increases. Naturals show little change.

Chicago Demand Good; Market Strong 134
By J. B. Waldo

Weather Slackens Eastern Demand 134
By N. O. Fanning

Basic Feature of Heat Exchangers 136
By A. F. Semino and E. L. Kallam
Certain fundamentals must be observed in designing equipment in order to secure maximum efficiency.

Refining and Marketing News 138

Plant Operators' Page 140

Refinery and Crude Prices 142-143

Tankwagon Quotations 144

Handling Gas With Flush Production 153
By Frank P. Peterson
Interests of natural gasoline manufacturer and producer require careful operation of gathering system.

ARTICLES OF GENERAL INTEREST

The Advertisers' Index 25

Natural Gas Developments 65

Equipment and Supplies 66-70

Men Known in Oildom and Personals 72

Detailed Operations in All Fields in June 74

Pipe Trade Position Very Strong 86
By B. E. V. Luty

Royal Dutch Operations 98

California Method of Cementing 130
By Harold J. Vance

Classified Want Advertisements 132-133

Oil Securities Ease Off During Week 146
By N. O. Fanning

What and Where to Buy 173-174-175

Crude Petroleum Statistics 176

BE A REGULAR READER

The Oil and Gas Journal Tulsa, Okla.

You are hereby directed to mail The Oil and Gas Journal to me for.....year. Enclosed find remittance $.....

Classify my interests as checked by me.

.....Producing .....Refining
.....Equipment .....Marketing

Name.....
Address.....
City.....

$6 a Year
$3 6 Months

Refinery Section Starts on Page 134

Flush Output Greater Than Decline

Highest daily average estimated production week ended May 30, 1925, 2,347,984 bbls. Lowest in 1925, January 3, 1,911,730 bbls.

New Development Offsets Loss in Older Fields. Mid-Continent Situation is Somewhat Better

By Andrew M. Rowley

Highest daily average estimated light oil production in 1925, week ended January 17, 1,525,220 bbls. Lowest in 1925, July 18, 1,374,173 bbls.

Crude oil production returned to its upward trend during the past week as the Salt Creek Field in Wyoming got back to normal following the severe storm of the previous week. New wells being completed in widely scattered areas are serving to offset the natural declines in the older fields while development work in the newer fields and in wildcat territory continues to add considerable flush production to the already large supply. In addition, deeper drilling in many of the older fields is opening new producing horizons with further large quantities of crude oil in sight.

There is considerable discussion about a softening in the crude oil market due to the large production at the present time and the outlook for a continued upward trend in output as a result of operations in the Texas Panhandle, around the new well near Mexia, in the Upton-Crane section of west Texas and in the Gulf Coast fields. If production continues to climb, there seems little doubt but what a crude price schedule readjustment will become necessary within the next 30 or 60 days.

Conditions in the Mid-Continent area, which section is generally regarded as the barometer of the entire industry, continue favorable although there is a feeling a price readjustment may be expected by early fall. The refined market situation is stronger with prices of gasoline, kerosene and other products showing more firmness. Crude is being withdrawn from storage at a rate now estimated at approximately 50,000 barrels daily in Oklahoma and Kansas. Very little decrease in crude runs to stills by the refiners should be expected and it is probable the demand for crude in the Mid-Continent will continue at a high figure. There is comparatively little gasoline in storage in the Mid-Continent and some of the larger refiners have been compelled to enter the market and buy gasoline for their requirements.

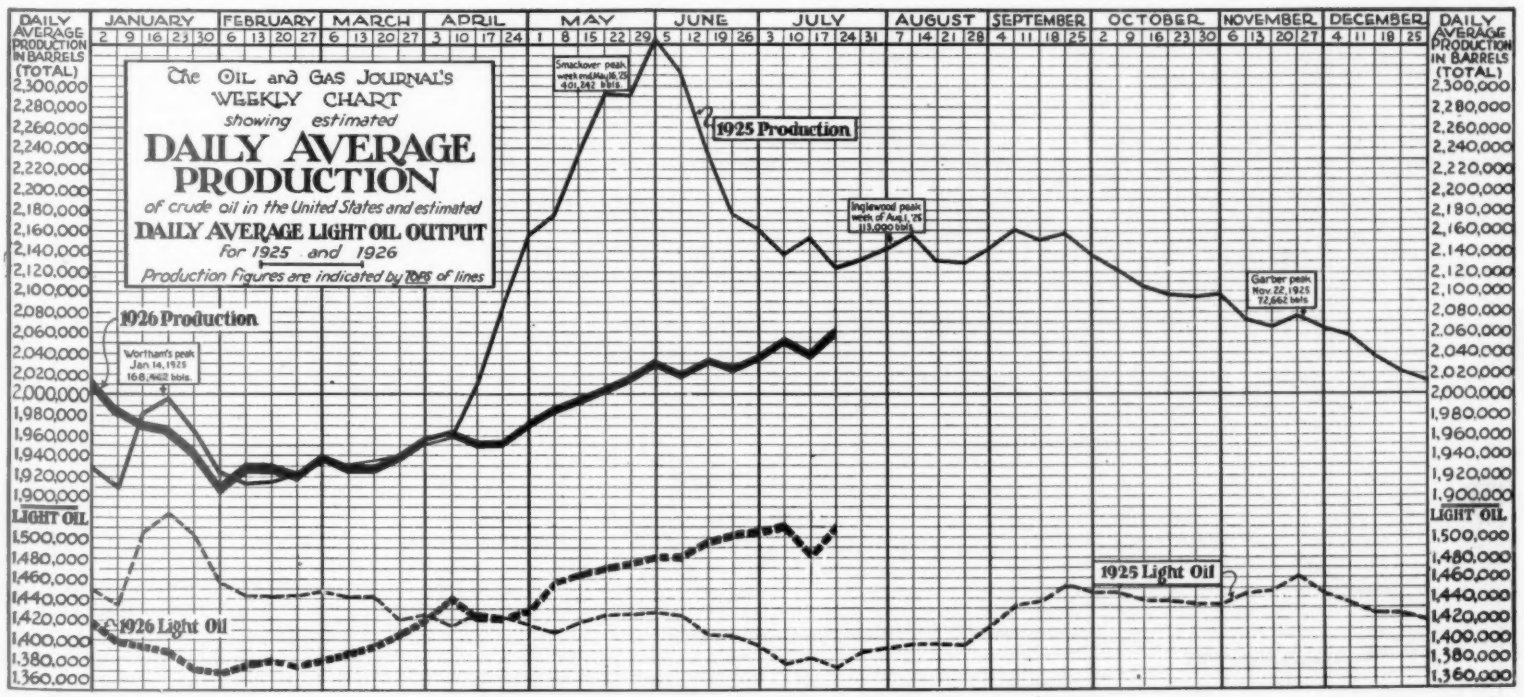
The crude oil situation, in a nutshell, might be stated as follows: Production may be expected to continue to increase for some time due to the Texas Panhandle and other new areas being developed. Production at present is greater than the needs of the industry. But there is not any really big new field in sight, although such discoveries as that near Mexia will furnish large quantities of crude which will offset declines which might otherwise have been expected.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity crude oil in the United States for week ended July 17, and a comparison with the previous week follows:

	July 17		July 10	
Oklahoma—	**Light**	**Heavy**	**Light**	**Heavy**
Tonkawa	37,715	.....	40,115	.....
Burbank	44,160	.....	44,245	.....
Other Osage Fields	34,415	.....	34,320	.....
Cushing and Shamrock	21,670	.....	21,610	.....
Bristow and Eastern Bristow	29,640	.....	29,680	.....
Cromwell	16 520	.....	17,245	.....
Garber	33.260	.....	34,515	.....
Blackwell-Braman	16,140	.....	16,870	.....
Davenport	8,470	.....	8,540	.....
Wewoka	33.320	.....	29,270	.....
Northern Miscellaneous	112 575	.....	111,335	.....
Southern Fields	66,425	.....	65,710	.....
Total Oklahoma	454,310	.....	453.455	.....
North Louisiana	43,455	12,830	42,870	14,700
Arkansas—				
Smackover Light	15,500	.....	16,005	.....
Smackover Heavy	.....	125,085	.....	124,650
Miscellaneous	21,840	.....	23,475	.....
Total Arkansas	37.340	125,085	39,480	124,650
North Central Texas	177,120	.....	175,105	.....
Texas Panhandle	61.225	.....	54,376	.....
Powell	29.275	.....	29,634	.....
Mexia, Currie, Richland, etc.	15 215	.....	15.415	.....
Wortham	7,750	.....	7,900	.....
Kansas	109,780	.....	109,585	.....
Total Mid-Continent Area	935,470	137.915	927,820	139.350
Gulf Coast	.....	117,865	.....	119,915
Southwest Texas	.....	40,040	.....	39,440
Eastern	105.850	.....	106.850	.....
Rocky Mountain Area	113,930	.....	96,532	.....
California—				
Santa Fe Springs	49,000	.....	49,000	.....
Long Beach	107.000	.....	107,000	.....
Huntington Beach	43,000	.....	44.000	.....
Torrance	6.000	23,000	6.000	23,000
Dominguez	20 000	.....	20,500	.....
Rosecrans	16,000	.....	16.000	.....
Inglewood	28,500	20,500	28.500	20,500
Ventura Avenue	46.000	.....	45,500	.....
Remainder of State	42,000	210,000	41,000	210,000
Total California	357,500	253,500	357,500	253,500
Total United States	1,512,750	549,320	1,488,702	552,205
Grand Total		2,062,070		2,040,907

Total Increase, 21,163 Bbls.; Light Oil Increase, 24,048 Bbls.


The Oil and Gas Journal's
WEEKLY CHART
showing estimated
DAILY AVERAGE PRODUCTION
of crude oil in the United States and estimated
DAILY AVERAGE LIGHT OIL OUTPUT
For 1925 and 1926
Production figures are indicated by TOPS of lines
1926 Production
1925 Production
1926 Light Oil
1925 Light Oil
Smackover peak week ending May 16, '25 401,582 bbls.
Inglewood peak week of Aug. 1, '25 113,000 bbls.
Garber peak Nov. 22, 1925 72,662 bbls
Wortham's peak Jan. 14, 1925 168,462 bbls.
DAILY AVERAGE PRODUCTION IN BARRELS (TOTAL)
LIGHT OIL
JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

WHAT AND WHERE TO BUY—PAGES 173-174-175

Nearly All Refined Products Strong

Gasoline, Kerosene, Fuel and Gas Oil Prices Advanced As Demand Increases. Naturals Show Little Change

By Neil Williams

The Oklahoma (Group 3) refined market the past week faced one of the best outlooks it has experienced this year. Every product, except possibly higher gravity gasolines and natural gasolines, was either strong or else firm with a tendency to strengthen.

Principal developments during the week were:

1. A quarter-cent advance in prices of motor fuels.

2. A 1-cent boost in kerosene quotations.

3. Strengthening fuel oils, reflected in price increases of from 2½ to 5 cents a barrel.

4. Further tightening of gas oil and distillates with the former product at least one-eighth cent stronger than a week ago.

Although refiners admit they still are not "out of the woods" on the gasoline situation, present conditions point to favorable markets at least the remainder of the month. Locally in Oklahoma, as well as the entire Mid-Continent, gasoline stocks apparently are in good shape but the uncertain conditions in other sections of the country prevent any certainty as to future market trends.

Oklahoma refiners have enjoyed a steady demand for motor fuels ever since several large refiners entered the market three weeks ago. This, with some reduction in production as a cut in crude runs to stills, has been removing practically all surplus gasoline output and also has made substantial inroads into stocks already accumulated.

One large refiner reported that the orders he received before July 15 had tied up all the output of his company's plants and the sales made since July 15 have been and will have to be from now on filled out of storage. This same refiner said that by August 1, if orders continued at the present heavy rate, his company would be on a seven-day basis, that is, the working stock would consist of only sufficient gasoline to last a week.

While some refiners still have a fairly large amount of gasoline available, many others are believed to be low as several are still in the market for additional supplies. One large refiner, who three weeks ago was forced into the market with an order for 2,000,000 gallons of U. S. Motor gasoline because its own supply was inadequate to cover its service station requirements, made an additional purchase of 500,000 gallons the past week.

The tightening of motor fuels in Oklahoma was further indicated by reports from several other refiners seeking gasoline and from some large buyers who declared that in their "shopping" they had found many refiners completely sold up and not quoting and that they had difficulty in covering their needs.

A number of inquiries for substantial amounts of motor fuel, either for prompt shipment or for delivery over the first part of August were received by Oklahoma refiners Monday and Tuesday. Inquiries from some of the leading jobbers in the Standrd Oil Co. of Indiana territory asked for quotations on 100 car lots.

Reports from the Chicago jobbing market are to the effect that the hot weather of the past week has stimulated gasoline consumption remarkably and that gallonage for the first part of July equalled that of the entire month of June. The same reports indicated that although jobbers were not buying generally in that market sellers were hopeful of a large business later in the week.

Buyers and sellers in Group 3 markets also are looking forward to record-breaking motor consumption the remainder of

(Continued on Page 148)

REFINED MARKET BAROMETER

Strengthening refined markets in the Mid-Continent and Chicago refining centers offered a contrast to the weaker tone which prevailed in most all other sections of the country the past week. Gasoline demand was fairly active in two former districts but the large stocks in the other sections, particularly California, where prices were forced down a half to three-quarters cent, threw a threatening light on the situation in the country as a whole. Kerosene also was strong in the Mid-Continent but weak on the eastern markets. Fuel oil and gas oil were firm to strong in practically every section east of the Rocky Mountains as were distillates, due to a marked increase in demand. Lubricants were generally active although markets were unchanged. Natural gasolines little changed although slightly easier in California fields.

Mid-Continent—All products, except natural gasolines, much stronger with prices higher. Motor fuels advanced a quarter cent, and kerosene 1 cent. Gasoline demand more active and kerosenes scarce. Fuel oils felt upward reaction as buyers entered market. Gas oil tight. Distillates stronger in anticipation of heavy demand. Lubricants active. Natural gasolines little changed.

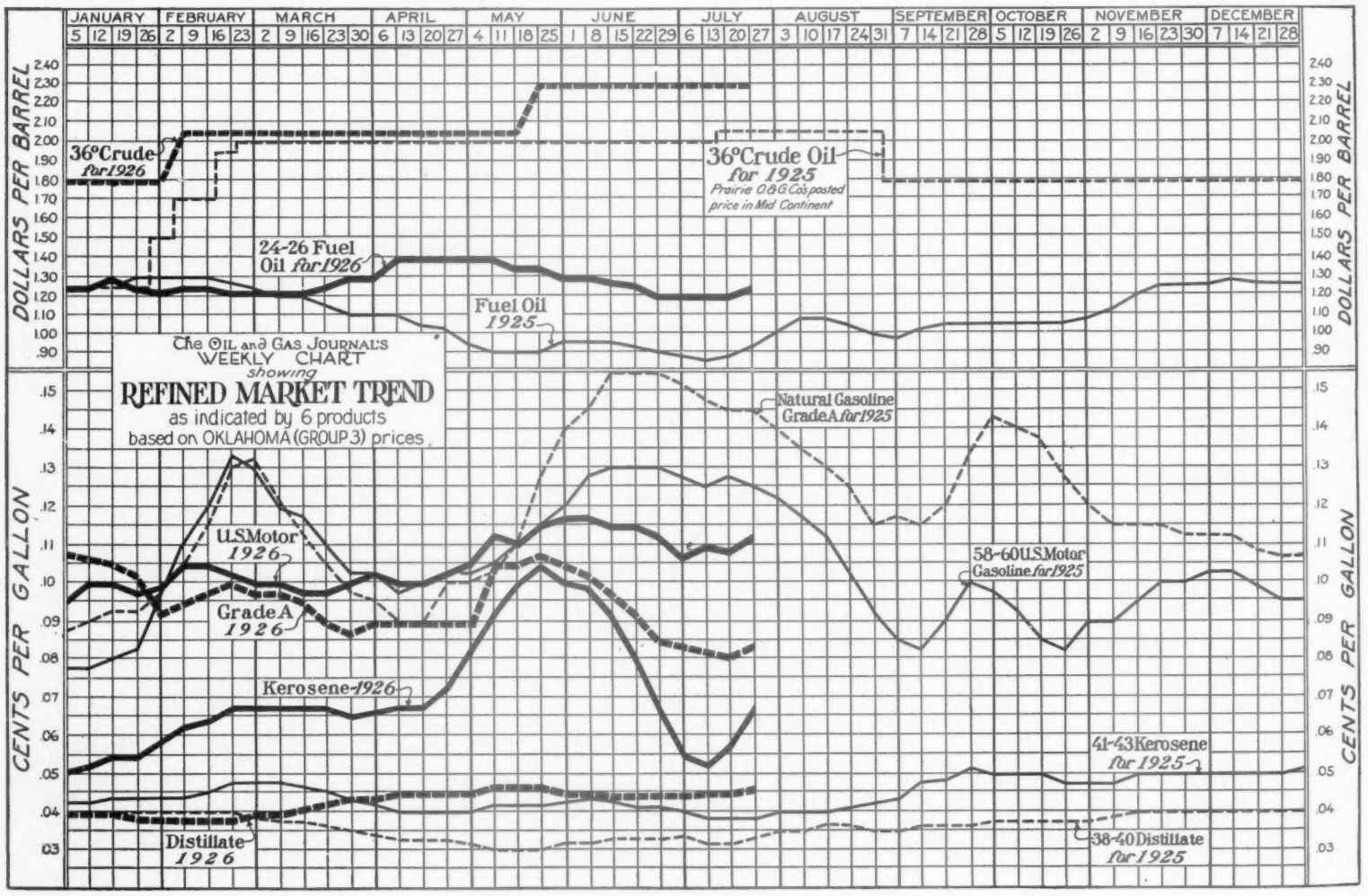
Atlantic Seaboard—Gasoline weaker as heavy stocks show up when demand slackens. Kerosene also easier and price shading more prevalent. Gas oil steady but quiet. Bunker oil demand better. Lubricants and wax unchanged.

Pennsylvania—Gas demand improved but kerosene suffered slight additional declines. Fuel oil weaker. Wax movements fair. Neutral more in demand. Bright stocks scarce.

Chicago—Gasoline picks up in demand, and quotations stronger. Kerosene scarce and higher. Distillates not offered freely and prices firm. Gas oil in demand. Fuel oil more active. Lubricants firm.

California—Gasoline prices off from half to three-quarters cent due to large supply of material available. Natural gasoline easier but prices firm. Fuel and Diesel oil inactive.

Gulf Coast—Unchanged.



XUM

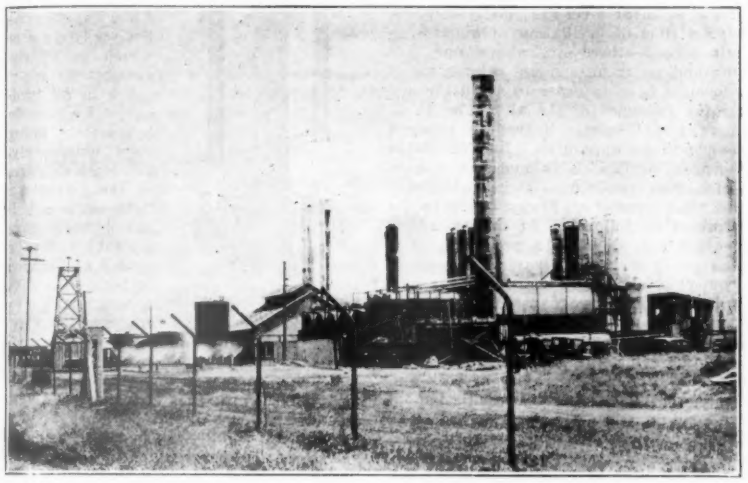
Refining With Panhandle Crude Oil

Amarillo Plant Has Had Many Operating Problems in Low Cold Test and High Sulphur Content Crude Supply

By C. O. Willson

AMARILLO, Tex., July 16.—One of the most important problems in connection with the rapid development of the petroleum resources of the Panhandle area is the refining of the crude after its production in the fields and its transportation by pipeline or tank car. The Panhandle crude to date is far from an ideal crude from the standpoint of the refiner and with a rapid increase in production this problem of manufacture is becoming increasingly important. This article deals with the problem of skimming the light oils products from the crude as solved by a local refinery.

The Amarillo Refining Co. is the pioneer refining organization in the Panhandle Field and its refinery here is the only plant now in operation. The company is owned by Reese S. Allen, prominent independent operator of Wichita Falls, Tex., who built the plant several years ago before production was obtained in commercial quantities in the Panhandle area.



1—General view of the Amarillo, Tex. refinery of the Amarillo Refining Co. This is the only refinery in the Panhandle Field.

The refinery was shut down for a time but has been in consistent operation for the past two years. The crude is brought to the refinery at Amarillo in a 6-inch line owned by the Pantex Pipe Line Co. (Dorset Carter interests.) This crude at the present time is coming from the Hutchinson County Field averaging about 36 degrees gravity at the plant.

When the Panhandle crude became available it was found that the plant was not suited to handle it and during the past two years it has practically been rebuilt. Although the amount varies the crude at the present time is averaging about 2,35 per cent sulphur and 2 per cent salt water with considerable sand.

Every plant operator knows what the presence of these impurities mean in securing finished products meeting the usual specifications and also appreciates the inevitable corrosion troubles in the maintenance of equipment. Add to this the fact that the crude oil has a cold test of 55 degrees Fahrenheit and you have a complete picture of the crude supply with which the Amarillo refinery operates.

Under the supervision of G. L. Rowsey, superintendent, numerous changes have been made in equipment and method of operation. The management has under way further improvements including the installation of a pipe still which will increase the capacity to 7,000 bbls. daily. This pipe still is of special design and if it gives the results expected by its designers, it will represent an important contribution in the handling of Panhandle crude.

Distillation Equipment

The distillation at the plant at the present time is accomplished with one pipe still and five 10 by 30-foot shell stills as shown in the accompanying illustrations. The crude is first passed through a heat exchanger where it is brought to a temperature of 250 degrees Fahrenheit. Before being charged to the pipe still it passes through a large settling tank where approximately 90 per cent of the salt water settles out and is drawn off. The crude then passes continuously through the pipe still and the five shell stills.

The exact method of operation will of course vary somewhat with the products desired. At the present time the streams from the pipe still and the first three shell stills are combined in making a 64-66 375 endpoint gasoline, which is sold to export buyers. The stream from the fourth still is naphtha with a 450 endpoint and the last shell still gives a 40-41 gravity distillate. A gas oil cut is also easily taken along with the distillate and this is usually done. This gas oil cut has been found to be excellent charging stock for all types of cracking processes, although it has a high cold test.

No kerosene is made at the refinery. The treating problem in the making of kerosene has never been fully solved to the satisfaction of the operators. Changes to be made at the refinery, however, it is expected, will make possible the refining of this product if the market justifies.

The company has worked out experimentally a method of treating the kerosene by filtering it through specially treated clay. This is to be tried out on a commercial basis. The Panhandle crude will give a substantial kerosene yield provided treating costs can be reduced to the point where they are not prohibitive.

The method of operating the crude battery including the pressures, temperatures and factionating equipment, is unusual in refinery practice and, according to the management, accounts for the large yield of high gravity gasoline and also the fact that no rerunning is necessary. A pressure starting at 20 to 25 pounds at the pipe still is maintained on the entire distillation and fractionating equipment. The pressure at the time of the release of the vapors to the condensers is about 10 pounds.

The three 4-inch vapor lines leading from the evaporator of the pipe still and the shell stills each connect to open shell towers 4 by 20 feet. As previously explained the pipe stills and the first three shell stills are used in making the high gravity gasoline cut. The open shell tower of each of these stills connects to what is termed a blending tower which is 5 by 20 feet. This tower as shown in the accompanying photo sets on the ground.

Blending Tower

The vapors after coming in contact with baffles in the lower part of the towers pass up through tubes surrounded with crude. The endpoint of the vapors leaving this blending tower are controlled through a thermostat instrument which automatically regulates the flow of crude through the shell around the tubes.

From the blending tower the vapors pass to the third of three towers located on top of the condenser boxes. These towers are of the bubble type. The bubble feature, however, is not utilized. The six pans of each tower are used as baffles so that in operation the towers actually belong to the baffle type.

The vapors pass continuously through these three baffle towers and then to a fourth baffle tower on the ground below the condenser boxes. From the top of this tower the vapors are finally released to the condenser boxes. This tower is simiilar to the blending tower with the automatic endpoint control.

The reflux from the nine towers is all returned to one accumulator tank. This reflux is recycled by mixing with fresh crude.

Sterling Condensers

Sterling sections are used in the condenser boxes. These sections last from eight months to a year. It was found that the ordinary pipe coil with the Panhandle crude had to be replaced about every two weeks due to corrosion.

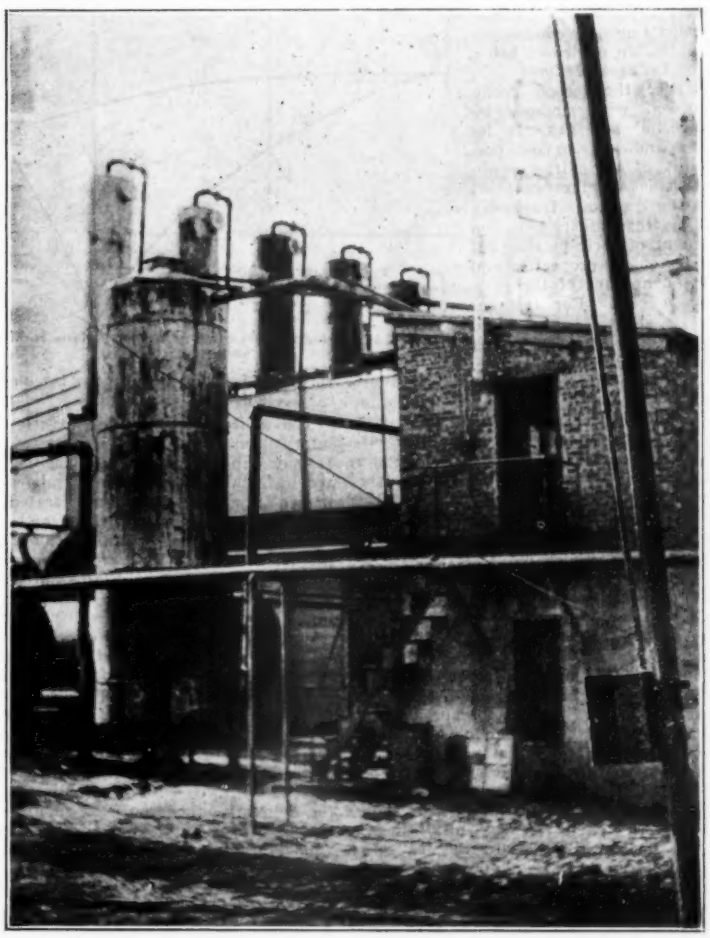
The arrangement of the Sterling sections in regard to connections with the vapor lines is somewhat unique. There are 130 sections for each tower. These are arranged in the condenser boxes in 13 units 10 sections high. The vapor line leading from the tower has connections to each of these 13 units. With this arrangement it is possible by closing the connecting valve to remove one of the sections for repair or replacement without interfering with the operation of the battery. A header arrangement for the main vapor lines leaving the towers enables the vapors to be passed to any one of the sections.

In the tailhouse the gasoline is received in pressure receiving drums in order to take care of the sulphur fumes. The gasoline is then ready for the treating plant.

Temperatures

Temperatures as well as pressures are higher than in the usual skimming operation. A temperature of about 450 degrees is maintained at the pipe still with

(Continued on Page 141)



2—Fractionating equipment of the Amarillo refinery. Tower resting on ground is blending tower. Vapors from open shell towers of the pipe still and the first three shell stills are blended and then pass to three baffle towers shown on right and finally to an eight tower, not shown, from which gasoline meeting 64-66 375 export gasoline is obtained.

Geophysical Methods in Oil Finding

Principle and Mode of Operation of the Torsion Balance Is Described. Gives Indications of a Geological Character Not of Oil Itself

By Dr. C. A. Heiland

The geophysical methods applied to the prospecting for oil, may be divided into groups.

One group aims to find oil by measuring directly the effect of the oil and gas in the strata. A sand soaked with oil, will be lighter than the same sand soaked with salt water. A productive oil sand will have a less conductivity for the electric current than a sand soaked with electrolytic salt water. The temperature of a drill hole measured at various depths is influenced by the normal increase in temperature with depth, but in case oil is present, a sudden increase of the normal temperature is often observed. A continuous examination of the cores has also shown that oil and gas horizons frequently have an increased radioactivity.

Changes in the physical properties of the strata by the presence of oil are not so great that they differ essentially from the country rock. In general the thickness of the oil bearing beds is small in comparison to their depth. In most cases the physical disturbances at the earth surface caused by the presence of oil in the subsurface are too small to be measured with known physical apparatus. The direct locating of oil by physical means is therefore limited to shallow deposits. For deeper deposits direct measurements must be confined to examination of drilled holes.

Indirect Methods

Under the second group we deal with methods by which oil and gas are located indirectly. One possibility of an indirect application is the fact that oil bearing strata frequently differ from other beds, on account of their petrological or tectonical properties and not on account of the presence of oil. For instance oil showings may be found in a series of sands which have a different specific weight from those surrounding them or which differ with regard to their elastic or magnetic properties. In case the productive beds themselves are not different from their surroundings, physically speaking, it will neverthless be possible frequently to prove their presence indirectly by means of the fact that they are deposited with other beds which have characteristic properties.

Suppose that two parts of oil deposit have been thrust into different levels by a big fault which has its outcrop at the surface and that a layer of gravel on top has also been affected by this fault, then this layer of gravel will have on one side of the fault a greater thickness. It will be possible, because gravel generally is lighter than older formations, to determine by gravitational measurements how the beds are faulted. The results of gravitational measurements show accurately where the deeper and the higher parts of the oil bearing strata lie beneath the surface. In case the oil formations form an anticline beneath the surface, where the physical properties of the producing layers are not different from those of the surroundings, it is then possible to locate this anticline by geophysical methods. If its core consists of a granite ridge, which is heavier more elastic and more magnetic than the country rock, the structure may be outlined with the help of three geophysical methods, the gravimetrical, the seismic and the magnetic.

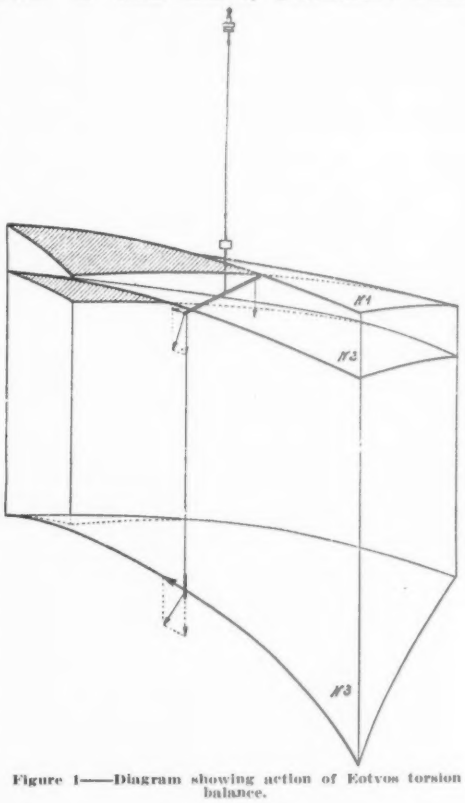


Figure 1——Diagram showing action of Eotvos torsion balance.

Salt Domes

The indirect application of geophysical methods to locating oil is best known in northern Germany, Texas, Louisiana and Mexico where experience has shown that the oil deposits frequently exist near the boundaries or above the top of salt domes. These salt domes generally have a lower specific gravity, higher elasticity and less magnetism than the surroundings. Attempts are therefore made to locate them by gravimetrical, seismic, magnetic and more recently by electrical methods.

The indirect methods do not give any information about the presence of oil. It may happen that it is determined by gravitational measurements above a known productive anticline located by drill holes, that it shows at the earth surface a maximum of gravity and that this anticline can be followed in unproven territory by gravimetrical measurements where the anticline is located later by drill holes, where, however, no oil is proved. The geophysical methods give information of a geological kind, that is information about the structure in which the occurrence of oil is possible.

The direct methods on the other hand give positive idea about the contents of the bids to the geologist or geophysicist. They point to indications about the presence of oil itself. For the application of the indirect methods no fixed rule can be stated because the geological structure in which the oil occurs may be different in each territory.

It is by far more advisable to apply the indirect methods because the different physical properties of the structure cause essentially greater and measurable disturbances at the earth's surface than the presence of the oil itself. For this reason we are going to discuss at first the indirect methods. Namely methods for measuring the gravity, in order to determine structures owing to differences in the specific weight of the strata. Then seismic and acoustic methods, by which the location of structures may be determined by their different influence on the velocity of transmission of elastic waves. Finally magnetic measurements, by which the change of the earth's magnetic field may be determined from observations on formations having different magnetic properties.

Gravitational Measurements

The oldest and best known instrument for measuring gravity is the pendulum. Its time of oscillation is a measure of the pull of gravity. Where gravity is greater, the pendulum swings quicker and vice versa. Nowadays pendulums of bronze or invar steel are mostly in use—with a time of oscillation of about one-half second—these are about one foot long and swing on a metal column under a vacuum hood in order to avoid the disturbing influence of the air. The U. S Coast and Geodetic Survey is using a one-pendulum apparatus. In Europe the Sterneck Apparatus is more in use in which four pendulums swing on a tripod. The gravity at any place is determined as follows: At first measurements are made with a pendulum at a place with a known gravity or with a gravity which can be considered as normal and the time of oscillation is observed. Then the time of oscillation is measured at the place where the gravity has to be determined, thus computing the relative difference of gravity at both stations, etc. The time of oscillation of the pendulum is determined according to the so-called coincidence method, that means the oscillations of the pendulum are compared with the oscillations of an astronomic clock which has nearly the same or nearly the double time of oscillation as the pendulum. The number of seconds is counted which passes between two moments in which the oscillations of both clocks coincide and from this the time of oscillation of the pendulum is determined. The astronomical clock is compared with astronomic time determinations or radio time signals. It is regrettable that the accuracy so far obtained with pendulum apparatus is not great enough to determine gravitational differences caused by locally limited structures. The pendulum apparatus has therefore only been used successfully in oil geology where it was desired to determine extensive deeply buried old formations.

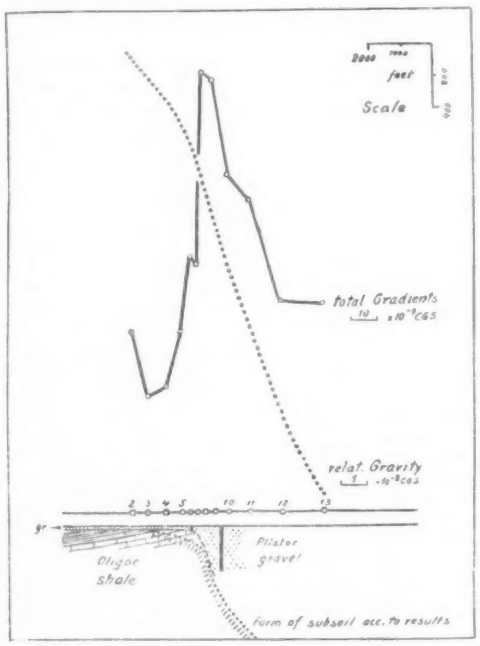


Figure 4—Torsion balance measurements obtained by the writer above the edge of a buried depression.

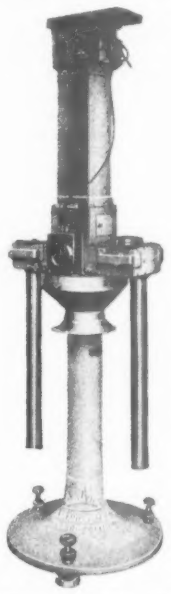


Figure 2.—Large automatic torsion balance.

For the gravimetrical location of local structures such as anticlines, synclines, faults, salt domes, etc., the knowledge of which is of the greatest importance in oil geology, the torsion balance is being used extensively. The simplest form of the torsion balance, is a balanced beam suspended by a thread and loaded at both ends with a weight. This was used by Cavendish for the determination of the gravitational constant, that is, the force with which two masses of one gramm each attract each other at a distance of 1 cm. Coulomb also used this balance in his electric and magnetic experiments. Baron von Eotvos discovered in 1888, that the torsion balance[1] if only sufficient thin threads and good isolation against air currents and temperature variations are used, may also be applied to the measurement of irregularities in the gravitational field of the earth. At the same time he improved the torsion balance by placing one weight of the beam deeper on a wire than the other, as in Figure 1.

Why this arrangement is valuable, may be seen by the following consideration: Let us assume a heavy body of spherical shape. Around this we may also assume many spherical planes at various distances from the center of the ball, upon each of which the potential of the gravitational attraction has the same value and to which the direction of the attraction is perpendicular. Such planes of equal potential of attraction or level planes can be assumed as being around every body; their shape is naturally similar to that of the geometrical shape of the bodies. If we imagine beneath the surface a series of horizontal strata, for instance sandstone and below that, also horizontally bedded heavy granite, the level planes above the earth surface will also have a horizontal course. Supposing now that such a level plane is going through the upper weight of the torsion balance and another through the lower one, the upper weight is affected by a force vertically downward and the

[1]This gravitational Eotvos-balance used for prospecting hitherto exclusively has nothing to do with electric or magnetic effects, as stated at various places.

lower weight is similarly affected by a downward force. As both forces are parallel, no deflection of the balance beam is caused.

We assume now that the granite is uplifted somewhere and that it forms a ridge. This uplift of a heavier mass brings naturally the level planes closer together, their distance apart is smallest just above the apex of the ridge where the gravity is the greatest. If we set up the torsion balance above the sloping side of the ridge, where a convergence of the level planes exists, and if we imagine again two of such converging level planes (N_1 and N_2, Figure 1) as passing through the upper and lower weight, difference in the directions of the forces attracting the weights will be noticed, temperature variations and air currents. For this reason the balance system is enclosed with a triple casing of aluminum. The theory of the torsion balance requires the measurement of the deflection of the balance beam in five positions of the movable part of the instrument in order to compute direction and size of the gradients and curvature values. As this would take too much time with a single system, at present the torsion balances used have two balance systems which are suspended independently and set at an angle of 180 degrees to each other. According to the theory of the double balance three positions of the instrument are then necessary in which the deflections of the balance beam have to be determined. The

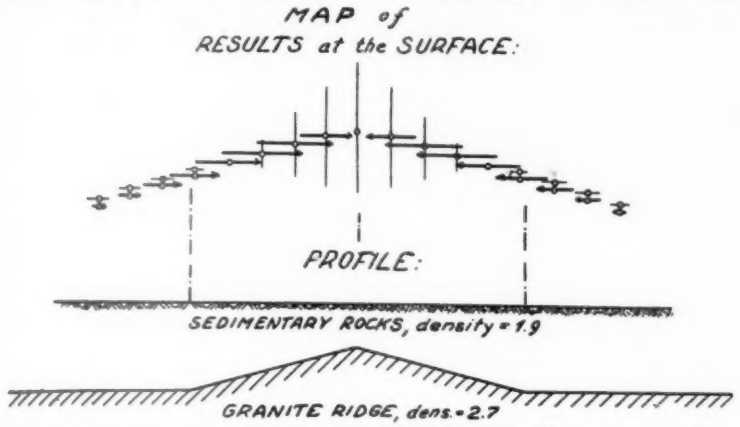


Figure 3—Gravity gradients (arrows) and curvature values (lines) above a buried granite ridge.

level planes. Above the apex of the granite ridge the gravity is the greatest, the level planes are parallel, no deflection of the torsion balance takes place there as far as the convergence of level planes is concerned.

What Balance Measures

Hence it follows that the torsion balance does not measure the gravity itself, but only the rate of change or the gradient of gravity and that for this reason it has its greatest deflections noticed which causes a horizontal component. This component tends to turn the beam in the direction of the greatest change of gravity. The torsional force of the suspension wire resists the horizontal component. If both forces are balanced, a horizontal deflection of the balance beam is caused which can be read visually or recorded photographically. As shown in Figure 1, the deflection of the balance beam is increasing in accordance with the convergence of the above the center of heavy masses, but near their boundaries. Furthermore the torsion balance measures certain other values with reference to the gravitational field the origin of which can be imagined by assuming that the hanging weight is placed at the upper end of the beam and that two level planes are passing through both ends (N_2 and N_1, Figure 1) which have different directions and therefore cause a torque. (This torque will also be measured if a torsion balance of the older form is used, i. e., with two weights at the ends of the beam in the same plane). The result of the theoretical computation of the last mentioned couple is that with both types of the torsion balance, not counting the gradients, certain values can be measured which state the deflection of a level plane from the spherical shape and the direction of its smallest curvature.

The mentioned values, the gradients of gravity as well as the so-called curvature values can be measured with very great accuracy, because the suspending thread is very thin (0.04 mm). The accuracy amounts to about one million millionth part of the gravity itself; a convergence of the level planes of about one hundred thousandth part of an arc second can be measured.

Theory of the Balance

Because such small powers are measured, a torsion balance must be protected with great care against all other influ-

determination of the deflection with the torsion balance designed by Eotvos and manufactured by Suess in Budapest is done by the eye. This requires the personal presence of the observer and is a possible source of error. For this reason improved types of the instrument with which the deflections are recorded, automatically an dphotographically are prepared. Such a torsion balance as perfected by Dr. W. Schweydar in Potsdam, Germany, and made by the Askaniawerke, Berlin, is shown in figure 2.

Several attempts have been made to reduce the size of the torsion balance. As may be seen from figure 1, the greatest convergence of the level planes is measured, when we have the greatest convergence of the level planes is measured, when we have the greatest vertical distance between both weights. If therefore the size of the torsion balance is reduced, this distance and with it the deflection will become smaller. Furthermore the length of the torsion wire is reduced, that means that its resistance against deflections is increased. This loss of sensitiveness caused by a reduction of the size could be compensated by a decrease of the diameter of the torsion wire, but experiments have shown that generally too thin wires are inpractical because of their greater elastic hysterisis and because they get broken too easily.

Dr. W. Schweydar therefore suggested such a form of the balance beam that would reduce the height of the instrument at the same time keeping the distance between the weights approximately the same as before. He designed a balance bar which is bent at its ends perpendicularly upward and downward, thus having one weight above and the second beneath the horizontal part of the bar.

As stated above, the torsion balance does not show any deflection above horizontal stratification except when there exists in the subsurface a difference in density in a horizontal direction. Hence structural bodies with steep flanks like salt domes, anticlines, faults, granite ridges and erosional depressions are best outlined by means of the torsion balance, thus assisting indirectly in the discovery of oil and gas.

Disturbances of Gravity

The disturbances of gravity which can be expected along the surface can be computed theoretically for simple geometrical shapes of such deposits. These theoretical computations are sometimes of considerable value for the interpretation of actual torsion balance measurements. Figure 3 shows the behavior of gradients and curvature values above a granite ridge covered by lighter, porous sediments. The gradients of gravity are represented by arrows and are at their maximum above the slopes while the direction of the least curvature of the level planes coincides with the course of the crest of the granite ridge. At a certain place above the slope the direction of the least curvature changes to a position at right angles. The greatest deviation of the level plane from the sphere shape exists just above the crest of the ridge as indicated b ythe length of the lines representing the curvature values.

In Figure 4 an example of torsion balance measurements is shown performed by the writer near an oil field. The problem was to determine the exact location of the boundary of an erosional depression filled with gravel, because this

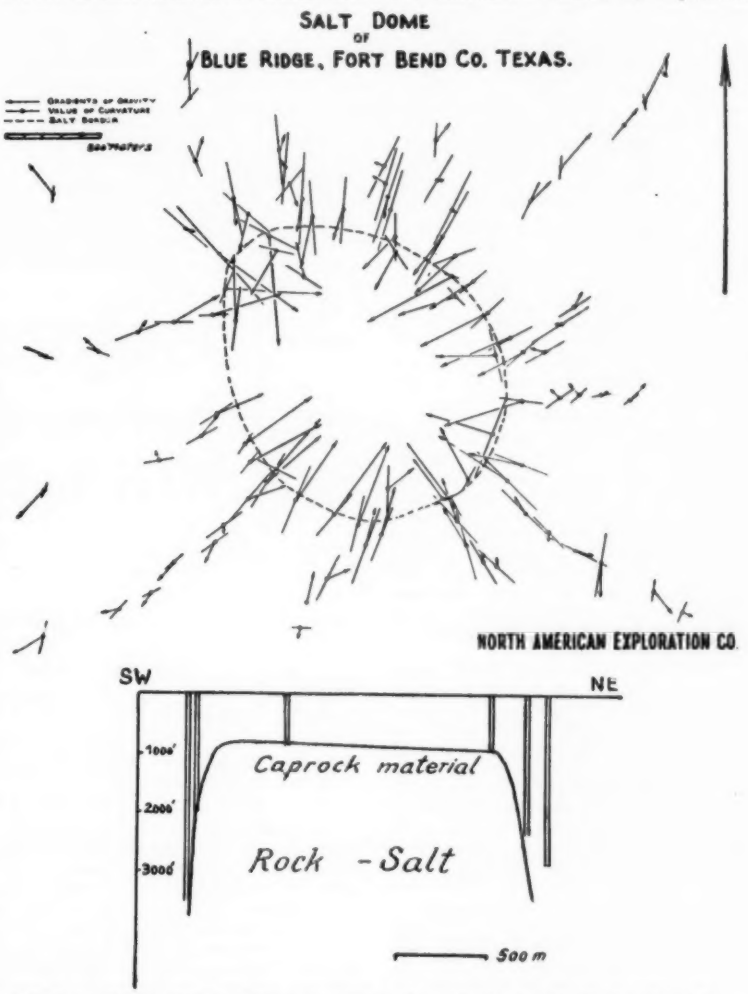


Figure 5.—Above: Torsion balance measurements made by the North American Exploration Co., above the Blue Ridge Salt Dome, Fort Bend County, Texas. Below: Southwest-northeast cross-section through the dome for comparison, after D. S. Hager.

boundary was presumed to coincide with a fault by which probably the deeper formations were displaced. The figure shows the maximum of gravity gradients just above the steepest slope of the edge of the erosional depression. From the gradients the relative gravity (dotted line) has been computed which is closely related to the geometrical shape of the slope.

Above Salt Dome

In figure 5 torsion balance measurements of the North American Exploration Co. above the Blue Ridge Salt Dome in Texas are shown. The gradients of gravity are represented by arrows the direction of which states the direction, and the length of which shows the magnitude of the change of gravity. The curvature values are represented by lines the length of which indicate the deviation of level planes from spherical shape and which run in direction of least curvature. Above the salt dome rather a minimum of gravity should be expected instead of a maximum because the salt is lighter than the adjoining rocks. However this minimum is noticed rather far away from the center of the dome and indicated by gradients pointing away from it. On top of the dome the influence of the salt is not only compensated but exceeded by the influence of the caprock which is heavier than the surroundings and attracts therefore the gradients and turns the curvature lines at right angles. During the past year three salt domes, completely unknown so far, have been located with the torsion balance and their presence confirmed by drilling.

Frequently it has been falsely assumed that the torsion balance can be used in North America only for locating salt domes and would fail to work in anticlinal structures as for instance in Oklahoma and Kansas. With reference to this statement it should be emphasized that the application of torsion balances for locating oil bearing anticlines has been recognized far earlier (H. v. Boeckh, 1917, No. 3) than its use for outlining of salt domes. The fact that the terrain is more irregular in Oklahoma than it is in Texas will not handicap the successful application of the torsion balance. The measurements performed in these regions require more computation because the influence of the terrain on the measurements must be taken into account. For this purpose various methods have been published.

Gravity Measurements

The main principle of methods for the direct measurement of gravity is based upon the fact that a weight is fastened on a horizontal elastic bar clamped at its other end and that the verifal displacement of the weight by the different

(Continued on Page 141)

Testing the Properties in Gasoline

Differ Markedly in Importance of Their Influence on the Quality and Use of Gasoline as Motor Fuel

By A. P. Bjerregaard
Formerly Chief Technologist, Empire Refineries, Inc., Okmulgee, Okla.

This paper deals with some of the physical and chemical properties of gasoline as related to its use in the motor and in relation to the preparation of specifications for this commodity. Of course, all the physical and chemical properties of gasolines in their various varieties have each their influence on the use and action of a gasoline in the motor. Here, however, only a few of the more readily perceived properties will be discussed, namely: Gravity, color, volatility, doctor test, noncorrosion, total sulphur, light stability, unsaturated, knock, odor, gum deposits.

These differ markedly in the importance of their influence on the quality and use of the gasoline as motor fuel. The methods used in testing these properties will not be discussed in this paper, but only the influence of the variations in each property on the use of the gasoline. Nor will manufacturing processes relevant to these properties be more than cursorily referred to.

All the properties of gasoline herein discussed intertwine and overlap in various directions, so that it is impossible to consider any one of them alone and entirely apart from the others. Consequently in what follows there is bound to be some overlapping in order to intelligently bring out fully the import of each property of the gasoline as it is considered.

Gravity

It is scarcely necessary to say nowadays that gravity is no measure of the quality of a gasoline. This is now fully recognized. It is also well known that cracked gasolines are heavier in gravity than straightrun gasolines of the same volatility derived from the same class of crude oil. It is likewise well known that straightrun gasolines, even of the same volatility, but derived from various classes of crude oils differ markedly in gravity.

There lingers, however, in the minds of many the idea that very light gravity indicates very high quality. There is a small element of truth in this when properly qualified, and when limited to straight run goods, inasmuch as under such conditions the lighter gravity gasolines will be more volatile. The subject of volatility will be considered more in detail under that heading. Nevertheless, light gravity may not always indicate as high a volatility as might be supposed since some light gravity crudes give light gravity gasolines that are not so volatile as gasolines of corresponding gravities made from certain heavier crudes.

Moreover, some cracked gasolines of quite heavy gravity are as volatile as some much lighter gravity straightrun gasolines.

The mileage output of heavier gravity gasolines is expected to be greater than from the lighter gravity gasolines, other things being equal, because power output depends on the weight of the fuel, not on its volume, and more pounds per gallon are found in the heavier gravity gasolines.

In view of all these conditions it is clear that gravity by itself has very little significance, and therefore gravity should be omitted from general specifications.

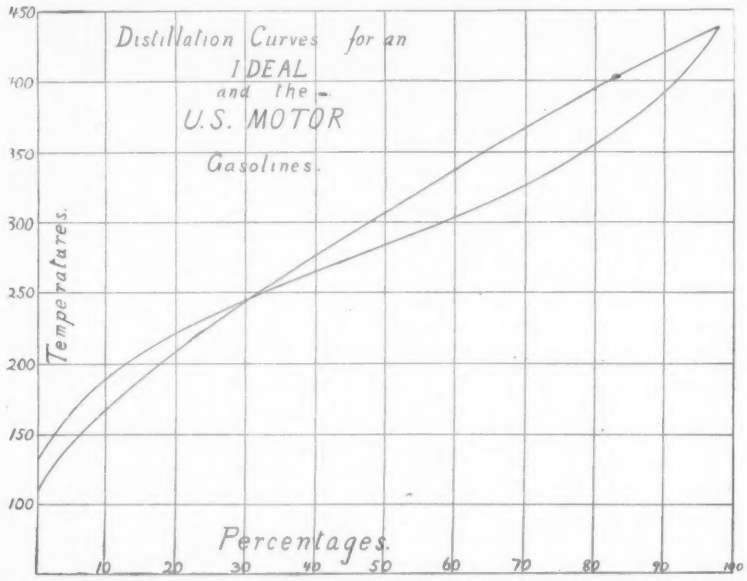
Color

It has commonly been supposed heretofore that the whiter the gasoline the more satisfactory it was in use. This is by no means always the case. If the color is due to the presence of gross impurities like crude oil, fuel oil, dirt in suspension, and such like, of course color would be highly objectionable, and in former days when gasoline was a nearly worthless byproduct such impurities might be present and so a fine white color would be a criterion of their absence. But now such things are practically unknown in gasoline.

On the other hand if the color is due to the inherent qaulity of the gasoline itself and the color is therefore volatile and distillable as is the case with most cracked gasolines and some straightrun ones, such color has no detrimental effect in use. In fact, as will be shown later, it may indeed be the criterion of actually better quality.

The cost and difficulty of removing these volatile and combustible coloring matters from cracked gasolines is a serious item. Moreover, in the process of removing these natural coloring matters there is a material loss of gasoline, which not only adds to the cost, unnecessarily, but it wastes a proportion of a valuable natural resource.

No consideration is here given to the artificial coloring of gasoline with red or other colored aniline dyes for whatever purpose this coloration is imparted.



Unless the dye used is volatile it will accumulate like any other nonvolatile impurity in the carbureter and cause trouble. Addition of such nonvolatile dyes is highly reprehensible.

Color, therefore, should be omitted from the specifications, except that possibly artificially added, nonvolatile coloring matter should be excluded.

Volatility

Next to combustibility the most important characteristic of motor gasoline is volatility.

The usual measure of volatility is the distillation range, embracing initial boiling point, end boiling point and various intermediate boiling points. The United States Government has set its stamp on a certain set of figures for these boiling points, which, as is well known, were deduced simply from a study of the average distillation tests of gasolines sold in the larger cities of the United States. These figures by no means show or indicate the best distillation figures for gasoline for motor fuel, nor even the best figures to enable the refiner to secure the highest yields of good quality gasoline from his raw materials, whether crude petroleum or cracked distillate.

On the accompanying diagram is shown a distillation curve derived from the government specifications, and also in a distillation curve of an ideal gasoline; ideal, both from the point of view of yields to the refiner and from the point of view of the user in his motor engine.

For convenience of comparison the distillation figures used in constructing these two curves are here given in parallel columns:

	Ideal Gasoline	U. S. Motor Gasoline
Initial B. P.	110°F.	131°F.
20% over	206	220
50	306	284
90	420	392
Endpoint	437	437

What it is desired to show here is the principle involved in the relative shapes, slopes and position of the two curves. In other words the ideal curve shown is typical, rather than identical, of an efficient gasoline—efficient both in making and in using.

Referring to the diagram: The lower part of this ideal or typical curve is drawn so as to include more light ends than U. S. Motor gasoline in order to give this gasoline quick starting and quick pickup qualities. This lower part of the curve is controlled by two factors: (1) by the amount of light boiling constituents in the crude, or in the cracked distillate, employed to manufacture the gasoline, assuming sufficiently cold condenser water, and, (2) by the amount and grade of natural gasoline blended in.

The upper part of the curve is drawn higher than the U. S. Motor in order to enable a larger yield of gasoline to be obtained during the distillation by means of highly efficient towers. The distillation curve cannot be made to fall into this shape unless very efficient distilling towers are used. In fact the efficiency of the distillation towers can be measured approximately by the slope of the distillation curve near its upper end. The steeper it is there the less efficient the separation by the distillation tower, and vice versa.

The high boiling constituents also tend to increase the mileage output of the gasoline per gallon as explained under the head "Gravity." And these heavier ends have no detrimental effect on the starting and pickup qualities of the gasoline, provided sufficient light ends are present. However, these heavy ends must be kept within limits, otherwise knock will develop. Hence 437 has been kept as endpoint, but as explained under the head "Knock" herein, this may be considerably higher with suitable cracked goods, or with suitable benzol blending.

Volatility, being so important, should form the most prominent item in all specifications. Just how this should be worded has not yet been settled. At present initial boiling point and endpoint probably must be used. But it is generally acknowledged that the endpoint is not a wholly satisfactory figure, and some more suitable figure to express the general volatility is being sought. Dewpoint, and the 85 per cent overpoint, and other things have been suggested, but no agreement has yet been reached.

Doctor Test

The doctor test shows the presence of traces of certain compounds that impart a color when the oil is shaken with aqueous sodium plumbite solution and a little free sulphur is added.

Now it has been proved by abundant evidence of use that these color generating compounds have no deleterious effects on the use of the gasoline in the motor engine, or its accessories. The amount of sulphur in the compounds that probably cause this color reaction is so small that no bad effect can possibly result therefrom. On the other hand, one of the processes used in the refinery to remove this positive doctor test reaction, namely, the doctor treat, not only does not lower the sulphur content, but may actually increase it, as has been demonstrated by chemical analysis many times.

Therefore a gasoline that does not give the positive doctor test reaction has no advantage at all over one of corresponding quality that does give this color reaction.

The compounds that produce the positive doctor test reaction even though they are sulphur compounds, have no corrosive action on metals. This is due to the fact that the sulphur is bound tightly and chemically to the hydrocarbon oils. Of course, as further discussed under the head "Noncorrosion," all corrosive sulphur compounds must be excluded.

Nothing herein said is to be understood as minimizing the deleterious effect of large percentages of total sulphur in gasoline. Indeed the point here desired to be emphasized is that high sulphur contest may easily be associated with the so-called sweet doctor test, and therefore absence of the doctor color reaction is no evidence whatever of freedom from sulphur or its compounds, or even that these are low. Total sulphur content should be kept as low as possible in order to avoid corrosion of engine parts from the products of combustion. It is the oxidized sulphur which may become injurious and this depends on the total sulphur content and not on the doctor test reaction.

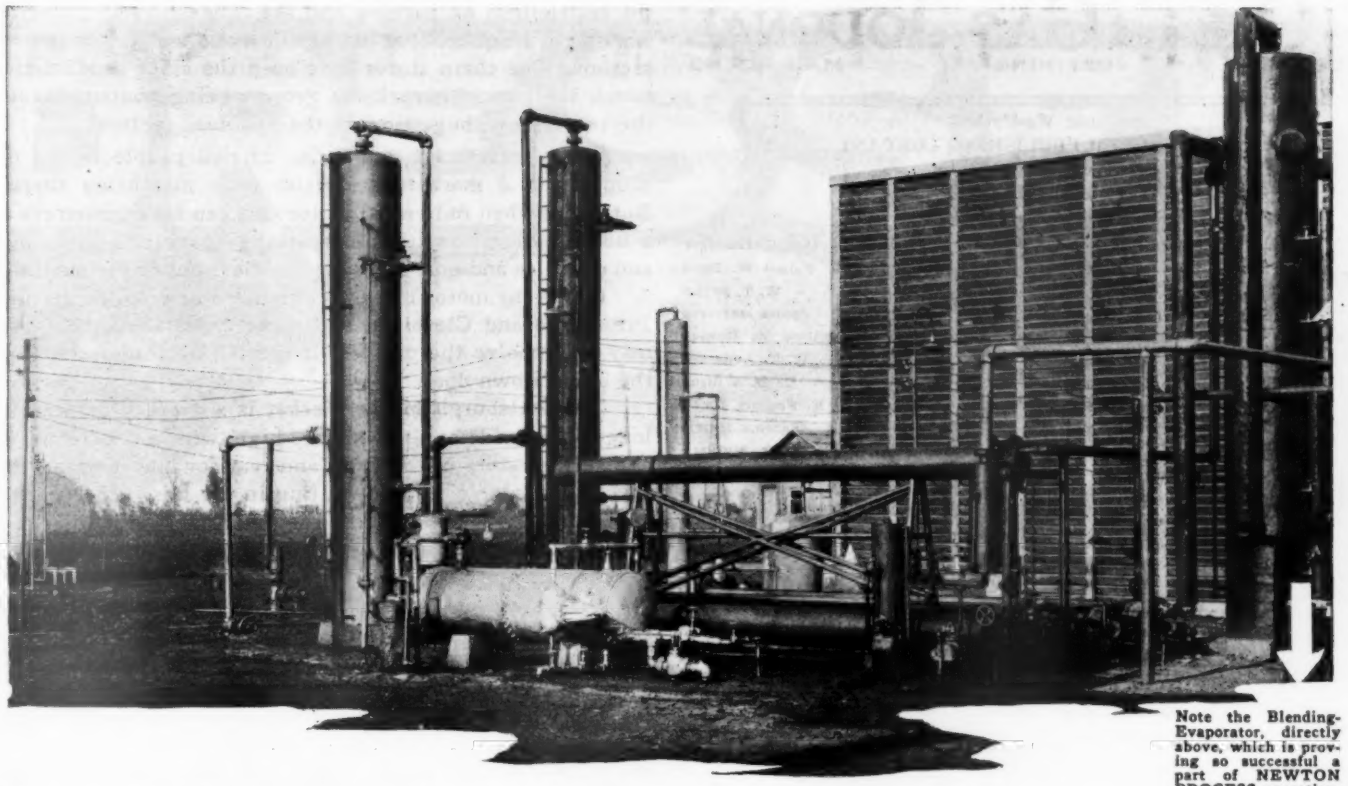
Gasolines that give a positive doctor test reaction are usually much more stable in color in sunlight than those gasolines that have been treated to remove this positive doctor color test. This is another reason for doing away with the doctor test as a criterion of quality.

The doctor test therefore, should be omitted from the specifications.

Noncorrosion

This is one of the most important qualities of gasoline. Corrosion is due to the presence of free sulphur, or of hydrogen sulphur, or of certain easily decomposed organic sulphur compounds in the oil. None of these sulphur compounds ordinarily show by the doctor test, that is to say by the sodium plumbite test. The doctor test, therefore, as fully explained under that head is of no value as an indicator of corrosion or noncorrosion. The

(Continued on Page 137)



Note the Blending-Evaporator, directly above, which is proving so successful a part of NEWTON PROCESS operation. Newton Process plants are rapidly becoming the *preferred* plants, and reasonably enough — they have always been the most efficient.

"The Old Order Changeth"—

but the NEW order is unswerving in its preference for NEWTON PROCESS Equipment.

Witness the Ohio Oil Company:

No longer content to accept mediocre absorption plant equipment, and mediocre plant operation, modern refiners and natural gasoline manufacturers are wholeheartedly endorsing NEWTON PROCESS—the modern and *better* equipment.

Witness the Ohio Oil Company's 10,000,000-foot plant, near Gilliam, La., as shown above.

A constant flood of orders have forced us to enlarge on our production facilities. We are now housed in a modern plant where complete Newton plants or any part will be promptly assembled and shipped.

Write any of our representatives for further information.

Representatives
NATIONAL SUPPLY COMPANIES
General Office,
Toledo, Ohio

HURLEY BROTHERS
Kennedy Bldg.,
Tulsa, Oklahoma

Foreign Representatives
THE NATIONAL SUPPLY CORPORATION
120 Broadway
New York City

THE NATIONAL SUPPLY CORPORATION
165 Victoria Street
London, England

"Better—Always Better!"

NEWTON PROCESS

MANUFACTURING COMPANY

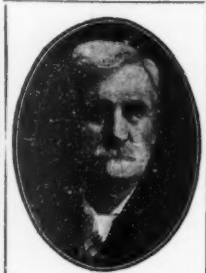
FULLERTON, CALIFORNIA

XUM

The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

Published Weekly by
THE PETROLEUM PUBLISHING COMPANY
114-116 West Second Street
TULSA, OKLA.



Established as an International Publication in 1910 by Patrick C. Boyle

President - - - - - - - - - - - - Frank T. Lauinger
Vice President and General Manager - - Robert W. Egan
Secretary - - - - - - - - - - - - - W. T. Bryan
Editor - - - - - - - - - - - - - James McIntyre
News Editor - - - - - - - - - Andrew M. Rowley
Associate Editor - - - - - - - - - - W. T. Anderson
Refinery Editor - - - - - - - - - - C. O. Willson
Technical Editor - - - - - - Charles K. Francis, Ph.D.
Advertising Manager - - - - - - - - Clarence Morris
Circulation Manager - - - - - - - - J. P. Mulkern

DISTRICT ADVERTISING OFFICES

C. L. CAIN, - - 30 Church Street, NEW YORK CITY
E. KLAPPENBACH, 1328 Peoples Gas Bldg., CHICAGO, Ill.
C. F. TOPE, 421 Union Mortgage Bldg., CLEVELAND, Ohio

TERMS OF SUBSCRIPTION
(By Mail, Postage Prepaid)

Single copies - - - - - - - - - $ .15
Three months - - - - - - - - - $2.00
Six months - - - - - - - - - - $3.00
One year (in United States) - - - $6.00
One year (in Canada) - - - - - $7.00
One year (foreign countries) - - - $7.00

ADVERTISING RATES ON APPLICATION
Telephones: 6291-6292-6293
Remittances by Checks, Drafts, Express or Postal Money Orders should be made payable to
The Petroleum Publishing Company
Cable address, "Oilgasnal"

MEMBER AUDIT BUREAU OF CIRCULATIONS

MORE USES FOR GASOLINE

The oil industry is primarily interested in the expansion of the market for its products. Price, we are again seeing, will take care of supply and price depends upon demand.

Happily, the world is finding new uses for petroleum every day. In fact, it cannot be too often reiterated that the half has not been told.

Just when we seem approaching the saturation point some new development opens an entirely different view.

With a car for every 38 feet of space on America's surfaced roads and one for every 72 feet on all the highways, as calculated by Automotive Industries, we might imagine congestion of traffic to the point of blockade was almost at hand. But we notice it only in the crowded downtown sections of our centers of population or on the highways near them on Sundays and holidays.

The difficulties in parking, indeed, are already restricting the downtown use of the car but those difficulties are being met by the development of the motor bus, another illustration that problems caused by new inventions usually suggest their own remedy.

The trolley car in its evolution played an important part in the spreading out of our cities, enabling millions to live at a distance from their work that would have been impracticable otherwise. But even before the motor car became a popular convenience the electric railway systems were becoming inadequate to handle the growing traffic of our communities. Elevated and subway lines could not keep up with the need and it must startle us to imagine what would be the transportation conditions of today if the oil industry had not made the universal use of the automobile possible.

Even nowadays with a car for every five or six persons in the country downtown congestion and parking difficulties are presenting the transit problems in a new guise. Motor bus lines may mitigate the situation for a time but thoughtful persons already foresee still another likely development in which gasoline and oil will be a vital factor.

As the motor car helped to decentralize residential districts, expanding them far beyond the capacity of the trolley or the steam roads, we are on the eve of a decentralization by the motor truck of certain lines of business dealing in commodities of daily use.

The difficulty of marketing in the downtown sections owing to the restrictions on parking and the congestion of traffic led to the starting of neighborhood markets more convenient to the residential sections. The chain stores have been the chief beneficiaries of this trend, their most remarkable growth being contemporaneous with the increasing congestion in the business centers.

When street cars and trains carried people to the downtown shopping and marketing district only merchants there thrived. But today when individual motor cars can take customers anywhere a business location offering parking space and downtown prices and qualities and quantities may be clear out of the business section.

Or, as the motor markets which are now appearing in Chicago, Pittsburgh and Cleveland and other cities show, the gasoline age may again solve the problem it created by bringing the market to the buyer's own door.

The Pittsburgh Motor Market is a grocery on wheels, 25 feet long, 8 feet wide and two stories high, with a counter in the center and refrigerators in the front and rear for butter, meats, etc. There are a half dozen already operating in the East Liberty district selling all sorts of staples with regular routes, stopping at the same places each day at the same hour. The average route reaches 600 families.

Others are operating in suburban Pittsburgh. There are 75 in successful use in Chicago and in Cleveland the Mototeria is on the same plan. They are pioneers of what will undoubtedly soon become a permanent American institution.

We have heard a lot about women marketing by telephone but the Motor Market seems likely to eclipse that because it offers all the convenience of the telephone with the advantage of being able to make a personal selection right at the door. Emergency buying alone will furnish a large business.

Few of us realize indeed, how much the motor truck has done to improve the quality and reduce the cost of food. It has assured retailers of quicker and more frequent delivery, enabling them to keep smaller and fresher stocks, it has reduced the number of warehouses and the cost of handling in distribution in many lines of business.

Building construction, too, it is figured, would be 50 per cent higher today were it not for the motor truck's service in unloading cars, saving demurrage, and the speed in unloading material at delivery points.

Motor trucks are proving invaluable allies to the public utility companies in maintaining public services. Equipped with lifting jacks, chain hoists or winches they are increasingly employed as power plants on wheels. Gasoline is not alone widening our horizons but it is reducing the cost of living by increasing productive and distributive efficiency.

The motor bus for public transportation has been familiar in large volume only in the past two years. Today it is being used in the remotest school districts to transport the children. It is linking up communities miles apart, creating new communities and enlarging old ones. The 70,000 or 80,000 buses of today will be a half million in a few years, using as much gasoline as 5,000,000 motor cars.

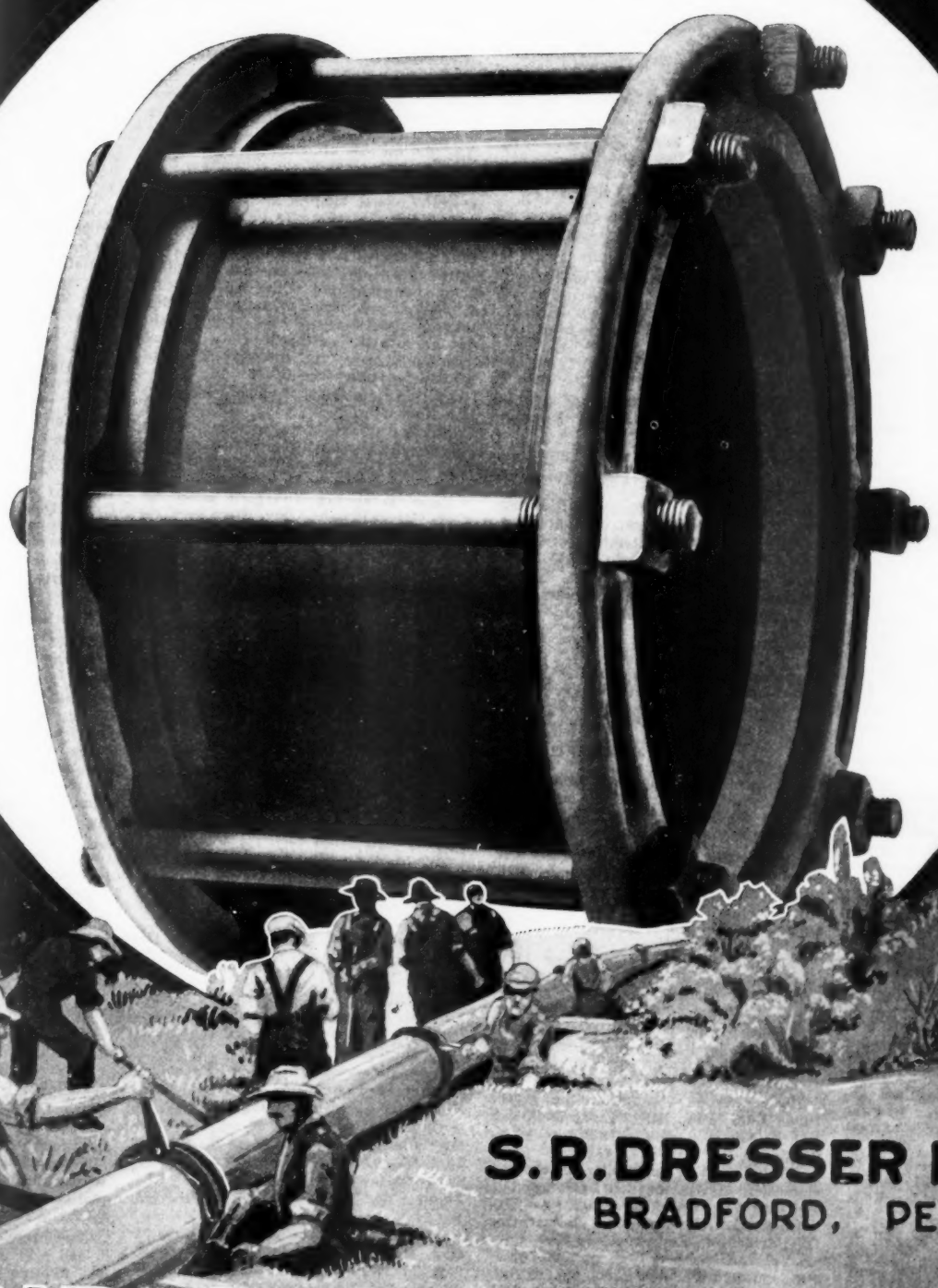
The luxurious tourist buses for land cruising now appearing are offering personally conducted tours for 5 or 10 days or longer, covering various sections of the United States. Summer cruises are being sold in Pittsburgh to Cleveland, Buffalo, Mohawk Valley, Albany, New York, Atlantic City and return. Also western tours through Yosemite, Yellowstone, Ranier, etc. Wonderful improvements are being made and comforts of all kinds installed upon these touring vehicles.

The final development of the bus will result in a tremendous consumption of gasoline and motor oil that will be an offset to the coming high compression motor.

Nor, speaking of the expanding demand for gasoline, can we much longer overlook aviation. As unromantic an institution as the National Bank of Commerce says in its latest bulletin that "the developments of the past 18 months have progressively removed one obstacle after another until today commercial aviation has a real opportunity to establish itself. There is little doubt at present that aircraft will develop increasingly important functions in the in-

(Continued on Page 38)

DRESSER



S.R.DRESSER MFG.CO.
BRADFORD, PENNA.

COUPLINGS DOMINATE

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

The Question and Answer Department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation.

Those connected with the marketing departments and others interested in the utilization of petroleum products are also invited to take advantage of the new service.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

GASOLINE DISTILLATION TEST

When making a distillation test of gasoline are we obliged to use the American Society for Testing Materials method and apparatus? It seems to us that an upright condenser from a tower would more correctly represent the modern product.—L. S. T.

There is no law with which we are familiar compelling you to use the A. S. T. M. method and apparatus, but we would suggest that you do use it should you wish to be prepared in case you should ever be brought into a controversy regarding the volatility of your product.

While it is an arbitrary method the conditions for making the test have been minutely detailed with apparatus which is easy to obtain. No doubt a more scientific distillation testing method could be designed and if such a method, fully described and not requiring very expensive apparatus, were submitted to the American Society for Testing Materials it would without doubt receive most serious consideration.

It must not be overlooked that the A. S. T. M. methods, as described in Technical Paper 323A of the United States Bureau of Mines, are primarily designed for referee work and for this purpose have been accepted as standard by scientific men and various organizations, in addition to the government, for examining petroleum products.

STACK DRAFT FORMULA

Will you kindly illustrate how the draft for a stack may be calculated?—V. C. A.

Draft is another term for pressure and is measured in inches of water. The development of the theoretical draft formula is well explained in Steam, from which the following is taken: Assume an atmospheric temperature of 62 degrees Fahrenheit and a stack temperature of 500 degrees Fahrenheit, then the weight of each on a basis of one cubic foot would be

air at 62° Fahrenheit=0.0761 pound
air at 500° Fahrenheit=0.0414 pound

Difference=0.0347 pound

Neglecting composition, it then appears that because of the expansion there is a difference in weight of 0.0347 pound in the two per cubic foot.

If a chimney 100 feet high were suspended in the air a pressure would be exerted on each square foot of its cross sectional area at its base of 3.47 pounds (0.0347x100). As a cubic foot of water at 62 degrees Fahrenheit weighs 62.32 pounds, an inch of water would exert a pressure 1/12 of 62.32 or 5.193 pounds per square foot. The 100-foot stack would therefore show a draft of 3.47÷5.193, or approximately 0.67 inch of water.

The force or intensity of the draft, not allowing for the difference in the density of the air and the flue gases, is given by the formula

$$D = 0.52 \times H \times P \left(\frac{1}{T} - \frac{1}{T_1}\right)$$

in which
D—draft in inches of water,
H—height, in feet, to top of stack above grate bars,
P—atmospheric pressure in pounds per square inch,
T—absolute atmospheric temperature*,
T—absolute temperature of stack gases.

The force of draft at sea level (which corresponds to an atmospheric pressure of 14.7 pounds per square inch) pr duced by a chimney 100 feet high with the air temperature at 60 degrees Fahrenheit and the flue gases at 500 degrees Fahrenheit is

$$D = 0.52 \times 100 \times 14.7 \left(\frac{1}{521} - \frac{1}{961}^{*}\right) = 0.67$$

Under the same conditions of temperature this chimney at a pressure of 10 pounds per square inch (10,000 feet above sea level) would produce a draft of

$$D = 0.52 \times 100 \times 14.7 \left(\frac{1}{521} - \frac{1}{961}\right) = 0.45$$

For use in applying this formula it is convenient to tabulate values of the product

$$0.52 \times 14.7 \left(\frac{1}{T} - \frac{1}{T_1}\right)$$

which we will call K, for various values of T_1. With these values calculated for assumed atmospheric temperature and pressure the first formula above mentioned becomes D=KH.

For average conditions the atmospheric pressure may be considered to be 14.7 pounds per square inch, and the temperature 60 degrees Fahrenheit. For these values and various stack temperatures K becomes:

Stack Temp	Constant K
750	0.0084
700	0.0081
650	0.0078
600	0.0075
550	0.0071
500	0.0067
450	0.0063
400	0.0058
350	0.0053

*Note—A question is to be answered in an early issue concerning absolute temperatures.

BLENDING NATURAL GASOLINE

We are under the impression that Grade A absorption gasoline makes a better blend than Grade AA as the gravity is nearer the "New Navy" than the Grade AA, and on this account the blend holds together better. It is our contention that not more than 15 per cent should be used in the summer months and that 15 per cent helps give the "New Navy" better mileage because of easier starting and that a snappier and cleaner explosion results. Three questions are asked: Which makes the best blend, Grade AA or Grade A? What percentage of natural gasoline may be blended with "New Navy" without hurting the mileage? Does natural gasoline improve the mileage, if so, in what proportion?—G. K. L.

At this time there is no official gasoline known as New Navy, so it is assumed that U. S. Motor gasoline, which has specifications that have been revised from those formerly applied to Navy gasoline, is the produbt to be blended.

There is no gravity specification for U. S. Motor gasoline but there is a required endpoint of not less than 437 degrees Fahrenheit. The natural gasolines mentioned are described as follows:

Grade Double A—
Recovery—Not less than 90 per cent.
Endpoint—Not over 375° F.
Gravity—80.0 to 87.9.

Grade A—
Recovery—Not less than 90 per cent.
Endpoint—Not over 375° F.
Gravity—72.0 to 79.9.

The actual gravity of the motor gasoline supplied to the trade in the United States probably varies between 54 and 60 A. P. I., so we may use 58 gravity for the purpose of illustration. By inspection of the gravities of the natural gasolines it will be observed that Grade Double A has the higher gravity and may therefore require less than Grade A for raising the gravity of the 58 gravity U. S. Motor to say 60 gravity. The fact that 72 is closer to 58 than is 80 cannot be a determining factor as to the stability of the blend. The important consideration appears to be the quality of the motor gasoline from the standpoint of fractionation, because a well fractionated stock will produce a more uniform blend than one that has been poorly made as indicated by the intermediate points on the distillation curve. It is also thought that the character of the crude, or chemical composition, as reflected in the gasoline has an important influence. Examples may be cited of a blend made with 56 gravity refinery gasoline containing 30 per cent natural gasoline which were perfectly satisfactory. It seems that the extent to which natural gasoline may be blended with refinery gasoline must be determined in each instance and is largely a matter subject to local conditions, especially the quality of the heavier stock. According to the conditions as you have outlined them it seems that the Grade Double A should prove the most satisfactory.

We have no data concerning mileage but understand that special research is now under way on this subject.

TANK BOILING OVER

Is the boiling over of the oil in a tank fire dependent upon the character of the oil or to water in the tank?—E. F.

Aside from the expansion of the oil on account of the increased temperature, the boiling over is usually due to the water which has been permitted to accumulate in the tank. This is explained by the fact that circulation is set up from the burning oil so that the entire body of the oil in the course of six to eight hours in the case of a 55,000-bbl. tank, reaches a high enough temperature to bring the water up to the boiling point. The weight of the oil prevents the gradual escape of the resulting steam and the sudden release of a large volume throws the oil out of the tank.

Investigations of the disastrous fires in California, which occurred a few weeks ago, have indicated that there were large quantities of water present and the suggestion has been made that effort should be made to keep the tanks free from water. An oil perfectly free from water should not boil over; when once iginted the combustion should proceed quietly.

HYDROGEN SULPHIDE

Give a simple test which it is possible to use in the field for hydrogen sulphide and state the ordinary physical properties of this gas.—H. H. R.

The particular odor, about the same as a bad egg, is usually sufficient to locate it. A 5 per cent solution of lead acetate (poisonous) may be carried in a small bottle, a few drops of this placed on a small piece of blotting paper, when thrust into a stream of gas containing hydrogen sulphide will turn brown and then black.

The physical properties are: Formula, H_2S; molecular weight, 34.09; specific gravity air—1, 1.1906; boiling point, —79.2° F.; cubic feet per pound, 11; specific gravity, water—1, 0.9; weight of cubic foot pound, 0.0909.

RECLAMATION OF LUBRICATING OIL; TULSA LIBRARY BIBLIOGRAPHY

By Technical Department, Tulsa Public Library

Apparatus for Recovery of Lubricating Oil Residues. Elcktrotechnischer Anzeiger, Vol. 40, Nos. 11 and 12, January 18 and 20, 1923, pp. 74-6, 80-2.

*Apparatus Reclaims Crankcase Oil. Petroleum World, Vol. 10, May 10, 1925, pp. 94.

*Bailey, R. W.—Cleaning Waste and Separating Oil. Elec. Ry. J. 66:439-41, S. 19, 1925.

*Banard.—Efect of Crankcase Dilution. Ind. Eng. Chem. 17:278, 1925.

Battle, J. R.—Industrial Oil Engineering, pp. 452-483.

*Brewer, Allen F.—Getting Better Service From Lubricating Oils. Indus. Management, Vol. 65, No. 1, January, 1923, pp. 13-18.

Brewer, Allen F.—Reclaiming Power Plant Lubricants. Elec. Light & Power, Vol. 1, No. 10, October, 1923, pp. 13-16, 64-65.

*Brunt, C. Van and Miller, P. S.—Reclamation of Automobile Crankcase Oil. Ind. and Eng. Chem. 17:416-23, Ap. '25.

Clark, L. H.—Fuel and Lubricating Oil Purification Reviewed. Oil Eng. Power, Vol. 3, December, 1925, pp. 700-702.

*Conover, W. R.—Salvaging Miscellaneous Wastes. Ind. Management, Vol. 57, January, 1919, pp. 12-16.

Continuous Treatment of Used Oils by a Centrifugal Purifier, Craft. Industric Electrique, Vol. 32, No. 736, February, 1923, pp. 66-68.

Crankcase Oil Rectified by Use of Exhaust Heat. Bus Transportation 3; 475-6, October, 1924.

*Curtis Motor-Driven Oil Extractor. Am. Mach. 60:269 F. 14 '24.

*Automotive Ind. 50:524 F. 28, '25.

*Day, R. B.—Are Reclaimed Oils Menace? Pet. Age, 16:20-1, November 1, 1925.

*Day, L. O.—Taxi Company Saves 80 Per Cent of Crankcase Oil by Recovery System. Automotive Ind., 54-532-3, March 25, 1926.

Dickie, D. W.—A New Lubrication Development. Pac. Mar. Rev. Vol. 20, 1923, pp. 451-2.

*Distillation and Centrifugal Force Used to Reclaim Lubricating Oil. The Oil and Gas Journal, Vol. 24, October 8, 1925, pp. 263, 270.

Drysdale, G. A.—A Simple Method of Reclaiming Lubricating Oils. Power, Vol. 56, November 28, 1922, p. 850.

Dumas, Paul—Problems of Crankcase Oil Dilution. Motor Age, Vol. 4, June 29, 1922, pp. 23-25.

Fenno, George—Reclamation of Used Motor Oil. Sci Lubrication, Aug., 1921, pp. 11-14.

Fischer, Alb.—The Alfa Oil Purification Method. Warmer Kalte Technik, Vol. 35, No. 9, May, 1923, pp. 69-71.

*Flowers, A. E., McBerty, F. H., and Reamer, R.—Deterioration and Reclamation of Used Automobile Crankcase Oil. Ind. and Eng. Chem., 17:481-5, Bibliography, pp. 484-5, May, 1925.

*General Electric Men Perfect Apparatus to Reclaim Crankcase Oil. Automotive Ind., 52:741, April 23, 1925, pp. 741. T. Pet. Age, 15:29, April 15, 1925.

*Grossenbacher, E.—Simple Oil Filter

(Continued on Page 100)

*Publications are in this library.

West Texas Oil Territory Extended

Producer Found in Winkler County on New Mexican Border. Hutchinson County Swells Panhandle Total. Pontotoc County, Oklahoma, Has a 300-Barrel Producer

The newest development during the week was the discovery of oil in the Westbrook and others' well in Winkler County, west Texas, on the southeastern corner of New Mexico. It was reported making a flow of 25 bbls. of 27 gravity, from top of the sand at 2,555 feet, and was standing with about 1,800 feet of oil part of which was water at the close of the week. It will be several days before the well is drilled deeper.

In the Texas Panhandle, Hutchinson County was responsible for the gain, increasing 7,390 bbls. Dixon Creek Oil Co.'s No. 3 Smith flowed 4,500 bbls. naturally. Gulf Production Co.'s No. 10 Dial flowed 587 bbls. in the first 21 hours; shot and bridged, it is spraying 20 bbls. an hour.

A 300-bbl. producer in Pontotoc County, Oklahoma, surprised the oil fraternity, that section south of the Canadian River not being considered favorably.

The Saginaw, Michigan, Field reported three producers, 1 mile west of production.

Oklahoma

Pontotoc County came to the front with a producer last week when LaSalle and others drilled in a test that is producing 300 bbls. daily. The section south of the Canadian River has long been regarded unfavorably and the producer was a big surprise. It is likely to be followed by a good play. The Independent Oil Co. and others drilled in a well southwest of the Seminole Pool which is aggregating 1,050 bbls. daily. In the territory between Hominy and Wynona in Osage County the Tidal Oil Co. completed a well making 540 bbls.

Kansas

A new pool was opened north of Keighley in Butler County by the Gypsy Oil Co., the White Eagle Oil Co. and others. The well is estimated at 150 bbls. It is 2½ miles from production. In northern Cowley County the J. A. Hull Co. has another well which is full of oil.

North Texas

Winkler County, west Texas, adjoining the southeast corner of New Mexico, leaped into the limelight with a well reported to have flowed 25 bbls. It was drilled by Westbrook and others, topping the pay at 2,555 feet. The oil is 27 gravity.

The Gulf Production Co.'s No. 1 Sanger in Upton County, was disappointing having 200 feet of oil and 2 bailers of water after standing 12 hours.

Texas Panhandle

Hutchinson County accounted for most of the gain in the Panhandle. Its 14 completions aggregated 11,245 bbls., an increase of 7,390 bbls. The Dixon Creek Co.'s No. 3 Smith was the biggest well of the week, flowing 4,500 bbls. naturally, with 10 per cent water. There are 121 wells at various stages below 2,500 feet promising a rapidly rising number of completions.

Eastern Fields

The best well of the week in the eastern fields was the Fellowship Oil & Gas Co.'s test in the deep sand of southeastern Ohio, in Hocking County, which produced 325 bbls. the first 24 hours after completion in the Clinton sand.

Lincoln County, West Virginia, is completing a good many gas wells. There is a lot of wildcatting in the southwestern West Virginia counties and if a new pool is found it is likely to be there.

The Preston Oil Co. completed a well making 172 bbls. in Coshocton County, Ohio.

Central West

The Tiffin Field in Seneca County, Ohio, had the best producer in the old Lima district during the week, 30 bbls. flush. In Martinsville Township, Clark County, Illinois, a 70-bbl. producer was completed. The new Berne Field in Adams County, Indiana, continues to attract attention, the latest well, 24 bbls. is three-quarters of a mile from production.

Kentucky-Tennessee

The small hamlet of Dunville in Casey County is stirred by the test of Irwin & Anschutz that shot the casing into the air and is showing about a barrel an hour through the rock. It may mean a new pool. The Rex Pyramid Co.'s test at Limestone, Carter County, is reported at 5 bbls. from the Weir sand at 446 feet. The Owensboro district continues to get most attention.

Canada

The Emerald Oils Co.'s well in the Irma-Wainwright Field looks like a good producer. Imperial Oil's tests in Alberta are making progress. A number of shallow tests are being drilled north of the Petrolia Field in Ontario.

Mexico

The American International Co.'s No. 30 in Los Esteros is testing 1,000 bbls., the only important wildcat in Mexican fields this year. There were 18 other completions, 7 of them producing, aggregating 45,150 bbls. Huasteca Co.'s No. 65 Tierra Blanca in the south fields is estimated at 30,000 bbls.

Rocky Mountains

The completion by the Repollo Oil Co. of a 50-bbl. well near Boulder, Colo., is likely to open a new field. Production was found in a sandy shale. It is expected the Repollo and the Mammoth companies will start other tests. The Prairie Oil & Gas Co. has brought in a 1,450-bbl. producer in the Lost Soldier Field. Salt Creek is returning to normal after the storm. The Ohio Oil Co. drilled into a gas sand in Stillwater County, Montana, 25 miles north of the Wyoming line, the first deep test there. A well on the east side of Sunburst Field, drilled to 3,300 feet last winter and shut down, made several flows last spring of heavy oil and is now flowing high grade crude. It was drilled by Frazier & McDonald. The Texas Company brought in a well in Tow Creek, Colorado, which has increased to 448 bbls., opening a new commercial pool.

New Mexico

The Maljamar Oil Corp.'s No. 1 Baish is standing full of oil following a shot of 500 quarts from 3,925 to 4,132 feet. Snowden & McSweeney are reported to have picked up a new sand in the Artesia Pool. The well is flowing by heads and estimated good for 150 bbls. naturally.

East Central Texas

The Transcontinental Oil Co.'s No. 1 Rossen which opened the Nigger Creek Pool west of Mexia produced 2,590 bbls. in the 24 hours, 10 days after it started flowing. Many locations have been made for tests in the district. The company says there has been no appreciable amount of water with the oil and the temperature has never been alarmingly high.

Michigan

The Saginaw Field was extended 1 mile west of production by the Bliss Petroleum Co.'s well on Fred Engle's farm, estimated around 20 bbls. in the Berea sand. The Valley Oil & Gas Co.'s well, No. 1 Graham-Mertz lots, in the city limits, east and south of the discovery, is estimated at 30 bbls. The Superior Oil Co.'s No. 1 Spatz, east of the Valley well, is estimated at 30 bbls. initial.

Southwest Texas

Several major companies are rigging up tests in the new Webb County Pool, discovered by the Tide Water Associated's No. 2 "A" Webster in the Carolina-Texas gas field. Eight wells were completed in the Bruni tract extension of the Mirando Field last week, five of them swabbing at a total rate of 3,350 bbls. daily and others pumping a total of 210 bbls. Activity in Bexar and Medina Counties, in the Randado Field, and Cole gas field is increasing.

Gulf Coast

The coastal semipools continue to furnish some big wells. The Humble Co. got a 3,000-bbl. well on the west side of the South Liberty Pool. The Rio Bravo Oil Co. added a well flowing 3,000 bbls. of 23 gravity oil from the deep sand at Spindletop where there are now 13 producers. The Gulf Production Co. got the best well of the week in Big Creek Pool, Davis County, which came in flowing 1,600 bbls. with chokers on at 2,960 feet. The flow increased to 4,300 bbls. The gas pressure is unusually heavy and it is thought the well might have made 7,500 if opened. The Gulf's No. 11 Taylor at Pierce Junction worked over is flowing 2,200 bbls. at 3,800 feet.

California

Long Beach seems to have passed its peak. The number of wells carried down to the McKeon sand has been smaller than expected and the daily production has shown a decline instead of an increase. Important extension work is planned at Huntington Beach by the Wilshire, Julian and Superior companies. Only a limited amount of development work is being done at Inglewood.

Louisiana-Arkansas

The Gilliland Oil Co. and W. R. Ramsey's deep test in the heart of the Haynesville Field in Claiborne Parish was bailed at 4,331 feet making 4,500,000 feet of gas and spraying a little salt water which is believed to be coming from 3,242-47 feet. The gas tested 560 gallons per 1,000,000 feet.

In Caddo Parish the Gulf Refining Co.'s No. 12 Tyson was completed making 42,000,000 feet of gas rich in gasoline content. In Bossier Parish Woodley & Collins' No. 1 went into salt water after blowing in as a gasser. It is to be plugged back and saved as a gas well. In the old Narborton district J. P. Evans' No. 1 Sutherlin made gas estimated from 1,000,000 to 4,000,000 feet. Drilled down it was reported making 25 bbls. of 38 gravity oil. DeSoto Parish is getting several deep tests.

San Juan Basin

Three new producers, two on unproven structures, are reported from the San Juan district of New Mexico. The Hall well on Red Mesa is reported to have an excellent showing of oil in the Dakota sand. Ute Consolidated Oil Corp., north of Shiprock, struck a flow of oil at 780 feet. The Continental-Santa Fe Co. brought in a 1,080-bbl. producer on the Rattlesnake structure.

Late News From the Fields

OKLAHOMA

Sinclair Oil & Gas Co.'s No. 11 Mullendore, SW cor. NW NE, Section 10-20-8, made 105 bbls. the first 24 hours from sand at 2,583-2,605 feet.

Frank Billingslea and others' No. 1 Wright, SE cor. SE, Section 17-17-8, has been shot with 20 quarts and is making 281 bbls. of 43 gravity oil.

In the Fuhrman Pool of Hughes County the Independent Oil & Gas Co. and the Transcontinental Oil Co.'s No. 6 Harjo, SW cor. NW SW, Section 26-9-9, made 75 bbls. on the swab from sand at 4,084-89 feet. This is the first deep producer in this pool.

In Lincoln County the Magnolia Petroleum Co.'s No. 1 Owens, NW cor. SE, Section 8-15-6, made 206 bbls. from sand at 4,065-68 feet.

In the Bald Hill region of Okmulgee County, J. L. Selby's No. 1, SW cor. SW, Section 15-15-14, made 360 bbls. from sand at 2,242-53 feet.

GULF COAST

HOUSTON, Tex., July 20.—The Bennett Production Co. junked and abandoned No. 2 Barber on the north flank at Barber Hill at 3,500 feet. The test was plugged back to 2,600-2,700 feet to test there. Same company's No. 2 Kirby is drilling around 2,435 feet. It has a location on the east side of the dome. Barclay & Meadows' No. 2 Barber is a location. The Bennett Production Co.'s No. 1 Barber, the discovery well on the north flank, is two months old and fluctuates between 180 to 220 bbls. per day, flowing by heads. Barclay & Meadows' No. 1 is pumping 135 bbls. 33 gravity oil.

The Houston-Gulf Gas Co. extended the Refugio gas field 1 mile northeast with its No. 1 Holmes making 40,000,000 feet at 2,100 feet.

The Valley Oil Co.'s No. 1 Thompson in Austin County is around 810 feet. The rig has been shut down for a week.

In Wharton County the Humphrey Corp. and J. W. Rich joint No. 1 Malone has started drilling. It is a formation test to go to 2,000 feet. The location is 16 miles west of the Boling Pool. These interests have drilled three shallow formation tests located from 12 to 14 miles west of Boling.

The Gulf company's No. 11 Taylor, Pierce Junction, worked over, is flowing 2,200 bbls. at 3,800 feet.

LOUISIANA

SHREVEPORT, La., July 20. — The Gilliland Oil Co. and W. R. Ramsey's No. XD-1 Taylor, Section 14-23-8, drilling for deep production in the heart of the Haynesville Field, Claiborne Parish, was bailed in at 4,331 feet, making 4,500,000 feet of gas and spraying a little salt water. The salt water is believed to be coming from 3,242-47 feet. The gas tested 560 gallons per million feet.

In Caddo Parish the Gulf Refining Co.'s No. 12 Tyson, Section 14-31-15, was completed at 3,819 feet, making 42,000,000 feet of gas rich in gasoline content.

MICHIGAN

TOLEDO, Ohio, July 20.—The Saginaw, Mich., Field was extended 1 mile west of nearest production by the Bliss Petroleum Co.'s well on Fred Engle's farm, Section 10, Saginaw Township, estimated around 20 bbls. in the Berea sand. The Valley Oil & Gas Co.'s No. 1 Graham-Mertz lots in the city limits of Saginaw, 80 rods east and south of the discovery well, is estimated at 30 bbls. The Superior Oil Co.'s No. 1 John Spatz, a few hundred feet east of the Valley well, is estimated at 30 bbls. initial.

SOUTHWEST TEXAS

SAN ANTONIO, Tex., July 20.—Eight wells were completed in the Bruni tract extension of the Mirando Field last week, five of the wells swabbing at the total rate of 3,350 bbls. daily and the other three on the pump and pumping a total of 210 bbls. daily. Of the eight wells Crown Central's No. 12 on the pump made 35 bbls., and No. 14 swabbed at the rate of 800 bbls. and Crown Central-Staley & Wynne's No. 3 "B" on the

(Continued on Page 148)

Winkler County, West Texas, Well

Westbrook and Others' No. 1 Hendricks Reported to Have Made a Flow Estimated at 25 Bbls. Gulf Co.'s Sanger Well Disappoints

By C. D. Lockwood
Staff Correspondent, North Central Texas

FORT WORTH, Tex., July 17.—Winkler County held the spotlight in west Texas during the past week as a result of an oil discovery in Westbrook and others' No. 1 Hendricks in the SE cor. of Section 42, Block 5, Public School Land. Due to condition of the roads leading to the well, and chiefly because of sand, reports were meager from that vicinity. The well, however, made a flow of about 25 bbls. as near as could be estimated and was standing with about 1,800 feet of fluid in the hole at the close of last week, part of which was water.

Prices asked for lease in that entire sector of west Texas naturally took a flying leap and as one official of a large company said, a lot of individuals scattered throughout Texas were "squeezing it to make it flow steadily." There is no doubt, however, that considerable activity will result from this find unless more water than oil shows up when it is drilled deeper.

It is now just on top of the pay formation at 2,555 feet. The oil is reported to test about 27 degrees gravity. The acreage around the wells is divided as follows: Westbrook and others, who drilled the discovery have only the 40 acres on which the well is located. The Eastland Oil Co. has 320 acres; Gulf Production Co., 800 acres in a spread; Pure Oil Co., 800 acres; Humble Oil & Refining Co., 640 acres; Republic Production Co., 640 acres; Independent Oil & Gas Co., 320 acres; Turman & Maxwell, 160 acres; Gilliam & Logan, 160 acres. All of this is out of the original 2,000-acre block worked up by Westbrook. Johnson & McCamey have 2,000 acres checkerboarded in the immediate district and are reported to have turned down $100 an acre offered by the California Co.

Sanger Well Disappoints

The biggest disappointment of the week in west Texas was the Gulf Production Co.'s No. 1 Sanger, in Section 14, Block 3, M. K. & T. Survey, Upton County, although it may still make a well. It had 200 feet of oil and 2 bailers of water in the hole at total depth of 2,757 feet after standing 12 hours. This oil was coming from 2,742 feet. The same company's No. 1 McElroy in Section 203, Upton or Crane County, was rigging up to drill deeper Monday. The oil flow had increased to 190 bbls. from total depth of 2,744 feet. The Gulf has made locations and is moving in rigs for several other tests all around the McElroy No. 1, all of which are listed in the report of west Texas wildcats.

The Marland Oil Co.'s No. 6 Sanger which started flowing at 4:30 a. m. July 11 and made 1,000 bbls. in the first six hours, produced 1,256 bbls. in the next 24 hours, then 1,068 bbls. July 13, 935 bbls. July 14 and 726 bbls. July 15, and was completed. No. 7 Sanger swabbed 130 bbls. at 2,224-60 feet on July 14 and 100 bbls. July 15. The Dixie Oil Co.'s No. 2 E. S. Hughes produced 2,400 bbls. July 11, 1,844 bbls. July 12, 2,058 bbls. July 13, 1,992 bbls. July 14 and 2,010 bbls. on July 15.

The Roxana Petroleum Corp.'s No. 1 W. R. Settle in Section 5, Block A, G. C. & S. F. Survey, Tom Green County, was dry and abandoned at 3,065 feet.

The only high spots in north Texas during the week were in Shackelford County, where the Cook Ranch Pool was still getting some good wells, the Stover-Dunn Pool of Brown County and the Rock Crossing area of Wilbarger County. These wells are listed in the completion report.

West Texas Wildcats

Andrews County

Amon G. Carter and Henry Zweifel's No. 1 Cowden, location. Henry Zweifel and others' No. 1 Means, location.

Brewster County

Green Valley Oil Co.'s No. 1 J. P. Wilson, was shut down at 2,170 feet. John Roseborough & Skinner's No. 1 Skinner, shut down at 750 feet.

Coke County

Lipan Oil Co.'s No. 1 E. C. Rawlings, shut down at 2,640 feet.

Concho County

Kemper Kimberlin and others' No. 1 Schultz, shut down at 1,425 feet. Eugene Mays and others' No. 1 Wilson-Hargrove location. Culberson Co.'s No. 1 W. S. See, spudding at 30 feet.

Crane County

J. S. Cosden and others' No. 1 Connell, shut down for orders at 4,085 feet, making 5 bailers of sulphur water at 3,915-4,015 feet. Cranfill Brothers Oil Co.'s No. 1 P. J. Lea, rigging up. Duffy Brothers and others' No. 1 Cowden, location. Gulf Production Co.'s No. 1 Crier-McElroy, building rig; No. 2, moving in tools; No. 3, building rig; No. 1 J. T. McElroy, rigging up to drill deeper at 2,744 feet, flowing 190 bbls.; No. 2, building rig; No. 3 rigging up; No. 1 State-Lasseter, moving in material. The Magnolia Petroleum Co. and others' No. 2 University Church, rig. Marland Oil Co.'s No. 1 Hughes & Gibbs, location. Marland Oil Co.'s No. 1 Durham, total depth 2,667 feet, with 1,000 feet of oil in the hole, top of pay 2,475 feet, plugging back 15 feet to shut off 100 feet of water and shoot. F. P. Zoch and Marland Oil Co.'s No. 2 Keith-Hughes, location. The Texas Company's No. 2 H. M. King, building rig. The Texas Company's No. 1-F Union Land Co., 2,000 feet of oil in the hole at 3,014-16 feet and making 10 bbls. of water daily; straightreaming 10-inch. Tidal Oil Co.'s No. 1 University, rigging up.

Crockett County

The California Co.'s No. 2 University, shut down for new string of 8-inch at 2,595 feet. Cranfill Brothers Oil Co.'s No. 1 Harris, location. J. S. Cosden and others' No. 1 Noelke, shut down at 3,275 feet. Cumberland Oil & Gas Co.'s No. 1 Couch, shut down at 960 feet. Magnolia Petroleum Co.'s No. 1 Shannon, drilling at 4,200 feet. The Marland Oil Co. and Wallace's No. 1 J. S. Pierce, location. W. M. Schaffer and others' No. 1 University, fishing for 8-inch at 2,191 feet. Ben Simon and others' No. 1 Shannon, drilling by tools at 1,240 feet. J. D. Young and Carl Cromwell's No. 1 R. Massie, drilling at 1,350 feet; No. 1 Shannon, location, (formerly was the Crockett Drilling Syndicate's No. 3 Shannon.) F. P. Zoch and Marland Oil Co.'s No. 1 University, shut down at 2,005 feet. H. F. Wilcox Oil & Gas Co.'s No. 1 University, underreaming 8-inch to 1,685 feet; hole full of sulphur water at 1,635-40 feet

Culberson County

Big Lake Oil Co. and others' No. 1 C. L. Cass, location. Deep Rock Oil Co.'s No. 1 Kloh & Rumsey, drilling at 2,000 feet. Pure Oil Co.'s No. 1 Mrs. Quaid, shut down nat 4,430 feet.

Ector County

J. S. Cosden and others' No. 1-A G. W. Connell, rigging up. J. S. Cosden and others' No. 1-B W. E. Connell, drilling at 2,300 feet Exploration Co.'s No. 1 Kloh & Rumsey, trying to land the 10 inch at 1,050 feet. Llano Oil Co. and others' No. 1 E. P. Cowden, rigging up. Simms Oil Co.'s No. 1 W. P Edwards, drilling at 600 feet. F. E. Skinner and the Eastland Oil Co.'s No. 1 J. W. Buchanan, drilling at 1,500 feet, top of salt 1,330 feet. Leigh Taliaferro and others' No. 1 Henderson, rigging up machine. Henry Zweifel and J. S Cosden's No. 1 Johnson, drilling at 1,305 feet.

Fisher County

Ideal Oil Co.'s No. 1 W. F. Martin, drilling at 1,550 feet.

Gaines County

Hucony Oil Co.'s No. 1 Lindsey, drilling at 1,440 feet, red rock.

Garza County

Deep Rock Oil Co.'s No. 1 S. M. Swenson, shut down at 2,618 feet. Emerald Oil Co.'s No. 1-A Connell, shut down at 3,200 feet. Emerald Oil Co's No. 1 J. M. Borden, shut down at 2,600 feet.

Glasscock County

Cass & Hoover and others' No. 1 Sparkman, shut down at 3,200 feet. Marland Oil Co.'s No. 1 Calder, shut down at 1,600 feet.

Tom Green County

M. D. Bryant and Marland Oil Co.'s No. 1 Llano County School Land, fishing tools at 2,980 feet. Roxana Petroleum Corp.'s No. 1 L. T. Clark, dry and abandoned at 3,065 feet. World Oil Co.'s No. 1 Pulliam, shut down at 855 feet.

Howard County

Deep Rock Oil Co.'s No. 1 W. T. Scott, total depth 3,605 feet, plugged back to 2,790 feet, 300 feet of oil in the hole; cleaning out. Joe Edgar and others' No. 1 Roberts, spudding. Lockhart & Carey's No. 1 Roberts, rigging up. Lockhart & Carey's No. 1 W. T. Scott, fishing tools at 655 feet. Lockhart & Carey's No. 1 O is Chalk, 1,200 feet of oil in the hole, at 1,553-86 feet, swabbing. Magnolia Petroleum Co.'s No. 1 Otis Chalk, flowed 29 bbls in 18 hours at 1,570-83 and 1,599-1,606 feet, completed. No. 2 Otis Chalk, location.

Marland Oil Co.'s No. 1 Otis Chalk, putting on the pump at 1,610 feet; No. 2 Otis Chalk, building rig. Owens & Sloan's No. 2 Otis Chalk, shut down at 1,607 feet. Reeves, Apperman and others' No. 1 H. R. Clay, shut down at 150 feet. Transcontinental Oil Co.'s No. 1 Roberts, spudding.

Jeff Davis County

The Herbert Oil Co.'s No. 1 T. M. Wingo, rigging up to deepen at 3,000 feet. Humble Oil & Refining Co.'s No. 1 W. W. McCutcheon, setting 10-inch at 1,555 feet. J. K. Hughes Development Co.'s No. 1 J. Z. Means, moving in material. J. K. Hughes Development Co.'s No. 2 Means, location.

Jones County

Phillips Petroleum Co.'s No. 1 Joe Winters, spudded, rigging up. Shaw & Rath-

(Continued on Page 149)

EDITORIAL

(Continued from Page 34)

dustrial and commercial activities of the world. To the current readjustment of transport the motor truck and bus are contributing a superior mobility. The contribution of aircraft to transportation is speed."

"Once a system of economic air communication has been built up," it adds, "this country should prove a most profitable field. The volume of air mail carried annually is larger than the total in England, France, Germany, Italy and Japan combined. The quantity of express freight is enormous."

The Bulletin of the American Bureau of Shipping says "the innate desire of Americans for rapidity in transportation will undoubtedly serve to be the incentive for a very quick and enormous development in this means of transportation now that the Government has given official recognition and aid. Transportation of goods and particularly of express matter, has already started and it needs no great range of vision to picture a wonderful expansion along that line in the not distant future. We may look to the air for some great advances in the matter of quick and reliable transportation in the next few years."

The ease and certainty with which Byrd and Amundsen flew to the pole and back has given a tremendous boost to aviation in the popular mind. The establishment of commercial lines flying regularly over established routes is becoming a commonplace. The chief drawback to more general use of the air in this country has been lack of confidence and that is now being assured.

Long before we reach the saturation point in motor car use the oil industry will be expanding its market in the air.

The world has become vitally dependent upon oil. It helped win the war. It kept the wheels of industry and commerce moving during the British strike. It proved equally valuable when the New York tubes were tied up. In this day and age it is inconceivable to imagine modern civilization getting along without it. And as its uses grow our dependence upon it will increase and the demand for it multiply year by year.

XUM

Mr. Charles Evans Hughes, former Secretary of State, representing the American Petroleum Institute before the Federal Oil Conservation Board at Washington, D. C., on May 27th, 1926, is quoted:

"The cracking process has done more for conservation than any legislative scheme which could be put into effect under our Constitutional system."

Universal Oil Products Company
Owners of the Dubbs Process
310 South Michigan Ave
Chicago, Illinois

Hutchinson County Makes Good Gain

Fourteen Completions Aggregate 11,245 Bbls., Increase of 7,390 Bbls. Dixon Creek Co.'s No. 3 Smith Flows 4,500 Bbls. Naturally

By C. D. Lockwood
Staff Correspondent, Texas Panhandle

AMARILLO, Tex., July 19.—Some large producers were added to the Hutchinson County area during the past week, the largest having been a natural flowing well on the Dixon Creek Oil Co.'s property in Section 11, Block Y, the district which has yielded most of the big producers so far. This well is No. 3 Smith and it flowed 4,500 bbls. naturally the first 24 hours, although it had a water content of 10 per cent. The oil-bearing lime was found at 2,868-72 feet.

Fourteen wells in all were completed during the week, every one of them in Hutchinson County, ranging all the way from the size mentioned above, and a 2,000-bbl. completion by the McMan Oil & Gas Co., down to a couple of 10-bbl. producers. By actual count there are 121 wells at various depths and in various conditions and stages deeper than 2,500 feet in Hutchinson County. A rapidly rising number of completions weekly may therefore be expected immediately. Many of these were standing with oil in the hole awaiting the shooter at the end of the week.

Three of this week's completed wells came in without the aid of ntiroglycerin, and the shots used in the others were for the most part comparatively light, the two largest being 360 and 320 quarts respectively. The total amount of nitro used in the 11 wells was only 1,710 quarts, which compares very favorably with the figures in the past. The combined initial production of the 14 wells was 11,245 bbls., and it raised the Hutchinson County weekly average 7,390 bbls., which wasn't so bad.

Completions

The Dixon Creek Oil Co.'s No. 6 Smith, in Section 11, Block Y, flowed 500 bbls., 20 per cent water, from the lime pay at 2,792-2,950 feet; No. 15 Smith, in Section 14, was shot with 360 quarts at 2,900-78 feet and flowed 700 bbls. initially. S. D. and W. W. McIlroy's No. 3 Smith, in the same section, was given a 320-quart shot at 2,927-3,017 feet and made 900 bbls. initially. The McMan Oil & Gas Co.'s No. 5 Smith, in Section 5, Block Y, flowed 2,000 bbls. after a shot of 180 quarts in lime at 2,709-61 feet. It was also making 15 per cent water. J. H. Middleton's No. 1 Smith, in Section 15, Block Y, was a disappointment, making only 10 bbls. after a shot of 160 quarts in lime at 2,862-2,910 feet. It had been plugged back to 2,910 feet from total depth of 2,965 feet. No. 2, on this same lease, was an equal disappointment as it made only 10 bbls. after a shot of 160 quarts placed at 2,818-68 feet, total depth being 2,880 feet, plugged back from 2,940 feet. Gulf Production Co.'s No. 1 Hodges, in Section 5, Block M-26, made 25 bbls. after a 90-quart shot at 2,920-78 feet, total depth 2,982 feet. The same company's No. 1-B Whittenburg, in Section 89, Block Z, produced 55 bbls. naturally from pay at 2,953-3,023 feet.

J. R. Phillips & Heywood's No. 1 Smith, total depth 3,010 feet, flowed 300 bbls. from pay at 2,900-40 feet and was completed. Phillips Petroleum Co.'s No. 1 Whittenburg-Mary Huff, in Section 12, Block Y, was shot with 100 quarts at 2,859-99 feet and was good for 1,000 bbls. the first 24 hours. No. 3, on the same lease, was shot with 80 quarts at 2,882-2,923 feet and made 150 bbls. initially. Phillips Petroleum Co. and Coble Oil Co.'s No. 4 J. A. Whittenburg, in Section 12, Block Y, was shot with 60 quarts at 2,926-50 feet and was good for 1,000 bbls. the first 24 hours. Total depth was 2,960 feet. Prairie Oil & Gas Co.'s No. 2 M. Weatherly, in Section 23, Block Y, was shot with 20 quarts in granite wash at 3,045-3,123 feet and made 100 bbls. White Eagle Oil & Refining Co.'s No. 2 J. A. Whittenburg, in Section 12, Block Y, was shot with 180 quarts at 2,716-74 feet, total depth 2,780 feet and made 127 bbls. the first 24 hours and 145 bbls. the next day.

Drilling Report

Barnsdall Oil Corp.'s No. 1 J. E. Pritchard was building rig and rigging up. Canyon Oil & Gas Co.'s No. 1 J. A. Whittenburg, total depth 2,802 feet, had oil in lime at 2,763-2,802 feet and was fishing. The Coble Oil Co. and Whittenburg's No. 1 J. A. Whittenburg was drilling by tools at 2,620 feet; No. 3 was drilling in lime at 2,685 feet. Derby Oil Co.'s No. 2 Johnson was cementing 6-inch casing at 2,930 feet. Derby Oil Co. and others' No. 1 Johnson was drilling at 2,650 feet. Devonian Oil Co.'s No. 2 Johnson was drilling at 2,350 feet; No. 3 at 2,435 feet. Dixon Creek Oil Co.'s No. 7 was drilling at 2,748 feet; No. 10 at 2,500 feet; No. 11 at 2,525 feet; No. 12 at 2,410 feet; No. 13 at 2,852 feet with 1,500 feet of oil in the hole and cleaning out; No. 16, at 2,450 feet; No. 17, cleaning out at 2,840 feet; No. 33, cleaning out to shoot at 2,790 feet; No. 34, drilling at 2,740 feet; No. 36, shut down for shot at 2,790 feet.

The Douglas Oil Co. and Cline's No. 1 J. A. Whittenberg swabbed 50 bbls. the first 24 hours after deepening from 3,087 to 3,093 feet. Top of pay was found at 3,040 feet. E. J. Dunnigan and others' No. 1 Johnson was moving boiler back at 2,620 feet where it had a gas sand. Echo Oil Co.'s No. 1 Smith was fishing for tools at 2,650 feet; No. 2 Smith was fishing for parted 6-inch casing, total depth 2,901 feet. It had been shot with 210 quarts at 2,845-2,901 feet and estimated worth 350 bbls. daily. Empire Gas & Fuel Co.'s No. 1 Johnson was drilling at 2,850 feet; No. 1 Johnson-B was setting 8-inch casing at 2,685 feet; No. 1 Weatherly was shut down at 2,965 feet; No. 3 (formerly No. 4) is a location; No. 4 was spudding at 50 feet.

W. Scott Heywood's No. 1 Christian, which was shot on July 12, with 600 quarts at 2,945-3,104 feet and bridged, flowed and swabbed 220 bbls. on July 15. Amerada Petroleum Corp.'s No. 1 Whittenburg, which was shot with 50 quarts at 2,985-3,036 feet, was cleaning out 35 feet off bottom and swabbing 15 bbls.

J. K. Hughes Development Co.'s No. 7 Kingsland was cementing 6-inch casing at 2,746 feet, total depth; No. 9 had a show of gas at 2,600 feet; No. 10 was drilling at 2,500 feet, and No. 11, at 2,780 feet. Dan A. Japhet's No. 1 Smith sidetracked the 6-inch at 2,596 feet and was drilling, total depth being 2,863 feet. Marland Oil Co.'s No. 1 Johnson was on fire at total depth of 2,780 feet; No. 1-A was drilling at 2,860 feet; No. 2-A, at 2,835 feet; No. 3-A, at 2,665 feet; No. 4-A, at 2,247 feet; No. 1 Martha Reimer, at 2,720 feet; No. 1 Weatherly, at 2,755 feet; No. 1 Weatherly-B, at 2,880 feet; No. 2 J. A. Whittenburg, at 2,500 feet; No. 3, at 2,475 feet; No. 1 J. A. Whittenburg-A, at 2,530 feet; No. 2, at 2,730 feet; No. 3, at 2,830 feet; No. 5, at 2,510 feet.

Shut Down for Shot

S. D. and W. W. McIlroy's No. 2 Smith was shut down for shot at 2,999 feet. McIlroy & Herring's No. 3 Smith was moving boiler back at 2,500 feet; No. 4 had a hole full of oil at 2,785 feet. McMan Oil & Gas Co.'s No. 1 Johnson-Martin Gray was making 3,000,000 feet of gas while drilling at 2,770 feet; No. 1 Johnson-Wheatley was drilling at 2,465 feet. Midwest Exploration Co. and others' No. 4 Smith had a show of oil at 2,680 feet and was drilling ahead. Newby Oil Co.'s No. 2 E. Cockrell was a new location with a rig on the ground. New Domain Oil Co.'s No. 2 Kingsland had 1,500 feet of oil in the hole and was fishing for tools at 2,835 feet.

Phillips Petroleum Co.'s No. 2 Johnson-Barnum was drilling at 2,635 feet; No. 1 Johnson-Stephens was drilling at 2,714 feet; No. 1 Johnson (formerly was Gibson Oil Corp. & McMillan's) was drilling at 2,820 feet; No. 1 Jeanette Kingsland (formerly was Gibson Oil Corp.'s No. 8 Kingsland) was shot with 200 quarts at 2,789-2,860 feet and was cleaning out to shoot again. Total depth is 2,874 feet. Phillips Petroleum Co.'s No. 3 Whittenburg swabbed 100 bbls. at 2,970 feet; No. 2 Whittenburg-Mary Huff was cleaning out and bailing at 2,807 feet; No. 4 was shut down for gas at 2,730 feet; No. 1 Whittenburg-Patton was cleaning out at 2,976 feet.

The Phillips Petroleum Co. & Coble Oil Co.'s No. 5 J. A. Whittenburg cemented 6-inch casing at 2,845 feet; No. 7, total depth 2,992 feet, was shot with 70 quarts at 2,968-74 feet and made 250 bbls. initially; No. 8 swabbed 100 bbls. at 2,965 feet; No. 9 was shut down for gas at 2,857 feet; No. 10 was making 25,000,000 feet of gas at 2,715 feet when the rig burned; No. 11 was drilling at 2,500 feet; No. 12, at 2,830 feet; No. 13, at 2,745 feet.

The Phillips Petroleum Co. and Gibson Oil Corp.'s No. 1 Kingsland (formerly was Gibson Oil Corp.'s No. 5 Kingsland) was drilling at 2,534 feet; No. 2 was repairing boiler at 2,856 feet; No. 3 was rigging up company tools at 2,770 feet; No. 4 was fishing at 2,785 feet. The Phillips Petroleum Co. and Jerry Oil Co.'s No. 4 J. A. Whittenburg was running 6-inch casing to 2,796 feet; No. 5 was moving boiler back at 2,630 feet. Phillips Petroleum Co. and Pulaski's No. 2 Johnson was drilling at 2,820 feet; No. 2 Smith, at 2,710 feet. This well is in Section 12.

Gain in Hutchinson

The Panhandle's production gain of 6,849 bbls. daily during the week ended last Saturday was due wholly to Hutchinson County, where all of the new wells were brought in and where the increase amounted to 7,390 bbls. This was occasioned by the new wells on the Dixon Creek, McMan Oil & Gas Co. and Phillips Petroleum Co. properties. The former company's production average increased 4,250 bbls. for the week as a result of its No. 3 Smith, which made 4,500 bbls. initially; No. 6, which was a 500-bbl. well and No. 15 which made 700 bbls. The McMan Oil & Gas Co.'s No. 5 was a 2,000-bbl. completion with 15 per cent water, and Phillips Petroleum Co.'s No. 1 Whittenburg-Mary Huff made 1,000 bbls. Three new wells on the Phillips Petroleum Co. and Coble Oil Co.'s property could not offset the decline of the wells and the net decrease was 475 bbls.

The daily average production per well in Hutchinson County jumped 11 points to 346 bbls. per well. By far the best averages for the week were the Canyon Oil & Gas Co.'s two wells, which averaged 4,550 bbls. and the Phillips Petroleum Co.'s two producers on the Jerry-Whittenburg property, which averaged

(Continued on Page 152)

OHIO FUEL AND COLUMBIA GAS IN $30,000,000 CONSOLIDATION

PITTSBURGH, Pa., July 16.—The merger of the Ohio Fuel Corp. of Pittsburgh with the Columbia Gas & Electric Co. of West Virginia into a new $300,000,000 corporation was approved yesterday by the board of directors of the Ohio Fuel Corp. at a meeting in its offices in the Farmers Bank Building.

Announcement was also made in New York of the approval of the merger by the directors of the Columbia Gas & Electric Co.

The combination represents more than 4,860,000 acres of gas, oil and coal lands owned and leased and embraces a highly important and valuable producing and distributing field in Ohio, West Virginia, Kentucky and Pennsylvania, with Pittsburgh and Cincinnati as the terminals and heavy consumption centers.

To Form New Company

Following the meeting of the directors, officials of the Ohio Fuel Corp. stated that the plan of merger is the formation of a new corporation to be called the Columbia Gas & Electric Corp. or some other suitable name, and the stock of the new corporation exchanged for the existing shares of the two merging corporations as the respective stockholders subscribe. George W. Crawford of Pittsburgh, president of the Ohio Fuel Corp., is the largest stockholder of the corporation.

Details of the plan are being worked out by the directors of the two companies and are being submitted to the stockholders. The new company will acquire directly or through subsidiaries the properties or stocks of the two concerns involved in the merger.

On completion of the consolidation the new corporation will have 3,000,000 shares of common stock outstanding. The present Columbia common stockholders will be offered one share of new common stock for each share now held and stockholders of Ohio Fuel will be offered for each share of Ohio Fuel stock approximately 35/100 of a share of the new common stock and about $15.63 par value of 6 per cent preferred stock of the new company.

Stock $300,000,000

A measure of the value of the stock of the new company is the value of the common stock of the Columbia Gas & Electric Co. to be exchanged share for share, which closed yesterday on the New York Exchange at 84⅝, somewhat lower than recent sales. The 3,000,000 shares of the new corporation under this measurement, together with the value of the new preferred shares, will give it a stock value of approximately $300,000,000. A bid of $100 a share for the new preferred stock, when issued, was offered yesterday on the Pittsburgh Stock Exchange.

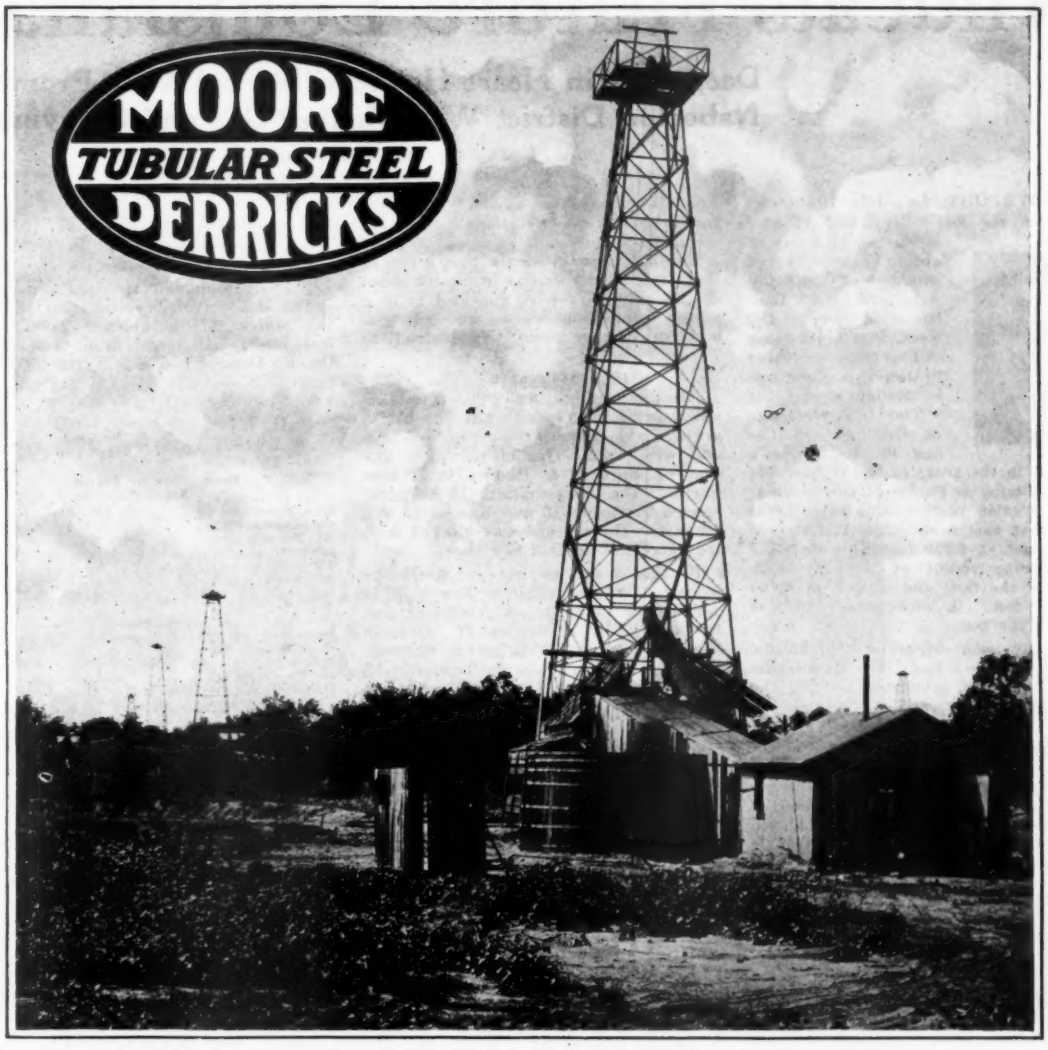
Heavy dealing and a rapid r'se in Ohio Fuel occurred on the Pittsburgh exchange during the past week as a result of reports arising concerning the projected merger.

Commencing about 36 immediately after the Fourth of July holiday's heavy buying rushed the stock up to daily high records, at one time touching 43½, and nearly 100,000 shares were traded in until yesterday. The stock opened yesterday at 42¾ and closed at 41, more than 10,000 shares being exchanged.

There are 4,285,000 shares of Ohio Fuel outstanding, having a par value of $107,125,000, and a market value of about $200,000,000 under recent trading. Columbia Gas & Electric Co. has outstanding 1,500,000 shares of common stock of

(Continued on Page 141)

XUM



Moore Steel Wheels

Quick Delivery

Since the building of our large new plant at Neville Island, Moore steel wheels can be delivered promptly, wherever and whenever desired. Moore Wheels, through many years of service, have been strengthened and improved in many ways. Why take chances with less dependable wheels?

Strength for every Emergency

The tube or pipe, when used as a column to carry compressive loads, is the strongest structural section known. It gives a greater strength by a margin of 40% or more as compared with other structural sections — the very thing you need to meet every emergency of time and service. This simple fact, with many other exclusive features of the Moore construction, accounts for its proven dependability. Of course, the Moore derrick costs more money; but that you ultimately make up in savings on freight and hauling alone. For the Moore is not only the strongest, but also the lightest derrick in existence. That's why there are more Moore derricks sold and in use than all other steel derricks combined.

Ask for illustrated catalog.

LEE C. MOORE & CO., Inc.

Pittsburgh, Penna. Tulsa, Okla.

Casper, Wyo. Dallas, Texas Shreveport, La. Parkersburg, W. Va.

Wildcats Feature Louisiana-Arkansas

Deep Test in Heart Haynesville Pool Most Promising. Naborton District Well Making Gas and Spraying Oil

By James H. Dameron
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., July 19.—Overshadowing the marked increase in new production brought about by a spurt of completions both in Arkansas and Louisiana during the week, was the actions of four wildcats, three in deep sands and one in shallow sand.

The big interest was in Gilliland Oil Co. and W. R. Ramsey's deep test in the heart of the Haynesville Field in Claiborne Parish. Their No. 1-D Taylor, Section 14-23-8, is threatening to revive that rich field. The well started blowing out at 4,228 feet Thursday and was throwing mud out of the hole. Drillers killed the flow and drilled on down to 4,231 feet. A white gas sand was cored at the test.

Saturday noon drillers started bailing the hole to make a test. The Haynesville test is the most promising now of the Louisiana deep tests and is being followed closely.

In Bossier Parish, Woodley & Collins' No. 1 L. & A., Section 14-23-12, went into salt water at 3,114 feet after blowing in as a gasser from the Woodbine at 3,110-12 feet. The well is to be plugged back and saved as a gas well. A little salt water was showing when the well blew in but this is believed to be coming from behind the casing. The drill went through 2 feet of rock before penetrating the salt water sand after the gas blowout and the operators believe the bottom hole salt water can be cemented off easily.

Naborton District Wildcat

The old Naborton district came back into the limelight as the result of J. P. Evans' No. 1 Sutherlin, Section 20-12-14, DeSoto Parish. The wildcat had sand at 2,951-55 feet making gas variously estimated at 1,000,000 to 4,000,000 feet and spraying a little oil. The hole was drilled on down to 2,985 feet without helping the well. It was reported Saturday morning as making about 25 bbls. of oil daily and that the oil tested 38 gravity.

DeSoto Parish is getting its share of deep tests. The Peer Oil Corp. of Tulsa, new operator in this district, has a block centering around the NW of Section 23-13-13, and will drill a 3,000-foot test in the NW cor. Section 23. Only one other test has been drilled in that township and that was in 1923 when a 2,814-foot test was drilled in Section 25. It had a show of oil but went the salt water route.

Ohio Oil Co.'s No. 1 Edenborn, Section 4-12-1e, Winn Parish, killed a flurry of excitement when it cored salt water sand at 1,486 feet. The test blew out at 1,480 feet and appeared to be showing a little oil. Cores revealed no oil in the sand and the last 2 feet of the formation was hard salt water sand. The test is being drilled deeper.

In the proven fields, 59 completions were recorded. For the most part completions were of the routine character. Outside tests in both Urania and Lisbon failed to widen their respective areas. The old Caddo Field broke the monotony of small producers when the Gulf brought in a couple of nice wells on the Ferry Lake lease. Only four completions were recorded in Smackover.

At the close of the week it was learned the Louisiana Oil & Refining Corp. has made a contract with the Crusader Oil Co. to operate the latter company's leases in Cotton Valley. Crusader had approximately 525 bbls. production in Cotton Valley and the contract was effective July 15, according to an announcement from the Louisiana offices. The deal was a part of the Louisiana's campaign for more oil.

The big noise in Mexia was heard in Louisiana and Arkansas last week when supply companies were appealed to in a search for tank builders. The call sent a large number from this district to Texas.

Plan Wildcat Tests

Blocking acreage for wildcat tests is still moving rapidly although the blocks are not as large as those reported several weeks ago. One of the week was that of Spencer & Rhodes in Tenesa Parish. The block contains 15,000 acres around Township 13 and Ranges 11 and 12 east. The acreage was blocked with the agreement to drill two tests.

Perkins & Snapp have a 6,000-acre block in DeSoto Parish in Township 11 and Range 11 west. A 3,000-foot test is to be drilled in Section 27. Over in Richland Parish, Williams & Carnody have a 6,200-acre block in Township 15 and Ranges 7 and 8 east. The acreage was obtained from small land owners. The Gulf Refining Co. got the biggest block of the week from the Wymond Lumber Co., in Richland Parish in Townships 17-18-19, Range 8 east, with an obligation to drill three tests on the acreage.

A couple of more blocks were completed in Jackson Parish. One when the El Dorado Oil & Gas Co. got a five-year lease on 2,000 acres in Sections 5 and 10, Township 14 and Range 4w. Grisby and associates blocked 3,000 acres centering around the SW of Section 22-17-4, and are to drill one 2,000-foot test. In Franklin Parish, Arkansas Fuel Oil Co. is obligated to drill one 7,100-foot test on a 6,000-acre block in Township 12, Ranges 6 and 7 east.

Production Declined

The daily average production of the two states skidded another 3,000 bbls. last week. Arkansas' drop came from the El Dorado and Smackover light oil fields. Smackover heavy gained. A 1,900-bbl. less in Urania production accounted for Louisiana's 1,300-bbl. loss while all but three fields were showing small gains.

Production by Fields

Arkansas

Smackover heavy	125,085
Smackover light	15,500
El Dorado	7,470
Lisbon	10,445
Nevada	2,155
Stephens	1,770
Total	162,425

Louisiana

Bellevue	2,350
Caddo light	10,375
Caddo heavy	2,815
Cotton Valley	7,860
DeSoto and Red River	3,900
Elm Grove	555
Haynesville	9,740
Homer	5,860
Urania	12,830
Total	56,285
Total both fields	218,710
Total last week	221,700
Decrease	2,990

Activity in Urania

As completion reports from Urania piled up the number of first reports in the field took a jump and kept activity there at par. Northeast of production the Spencer & Rhodes wildcat, No. 1 Urania, Section 1-10-1e, blew out at 1,320 feet making an estimated flow of 5,000,000 feet of gas and a big batch of fresh water. It blew a few days and then died. The operators have moved the rig over to No. 2 Urania, 100 feet north and 200 feet west SE cor. Section 1-10-1e.

The area around the townsite of Tullos was again the area with the best wells of the week. Love and associates' No. 5 Zimmerman, Section 25-10-1e, was finished in sand at 1,510-14 feet flowing 250 bbls. H. L. Hunt's No. 11 Tullos Heirs, Section 26-10-1e, was completed at 1,488-1,500 feet flowing an equal amount of oil. O. W. Clark's No. 2-D Russell, Section 15-10-1e, is pumping 50 bbls. of fluid, 50 per cent salt water, from 1,559 feet. His No. 4 Tullos, Section 23-10-1e, is flowing 25 bbls. from sand at 1,502-05 feet. Dixie Oil Co.'s No. 7 Urania, Section 24-10-1e, was a duster at 1,560 feet.

Up in the north end of the pool, Beckman & Freeman's No. 1-B Urania, Section 7-10-2e, is flowing 25 bbls. from 1,516-20 feet. On the east side Gibbons and associates' No. 1 Urania, Section 20-10-2e, was a failure at 1,553 feet and was abandoned. Hamilton and associates' No. 1 Wright, Section 26-10-1e, was completed at 1,543-48 feet making 25 bbls. naturally. Hardtner Oil Co.'s No. 5 Urania, Section 7-10-2e, is flowing 200 bbls. of fluid, 70 per cent salt water, from 1,525 feet. H. L. Hunt's No. 14 Tullos Heirs, Section 26-10-1e, is flowing 25 bbls. daily from sand at 1,491 to 1,503 feet. Hunt McCurry and others' No. 2 Urania, Section 7-10-1e, is making 100 bbls. on the beam from 1,518 feet. Same operators' No. 4 on the Urania lease is flowing 50 bbls. from sand at 1,505-09 feet.

Louisiana Oil & Refining Corp.'s No. 33-B Tremont, Section 25-10-1e, is flowing 125 bbls. daily from 1,538-43 feet. Five completions were recorded on the Natural Gas & Fuel Corp.'s Urania lease, Section 18-10-2e. No. 5-E is flowing 25 bbls. from 1,520 feet; No. 6-E is pumping 40 bbls. at 1,513 feet; No. 2-F is flowing 125 bbls. at 1,552-56 feet; No. 3-F was a duster at 1,608 feet; and No. 1-K is making 10 bbls. on the pump from sand at 1,546-49 feet. Tunica Petroleum Co.'s No. 3 L. & A., Section 19-9-2e, was abandoned in salt water sand at 1,858-78 feet. George W. Wetherbee wound up the completions with his No. 3 Norrid, Section 25-10-1e, which is pumping 40 bbls. of fluid, 50 per cent salt water, from sand at 1,548-54 feet.

Other Operations

Six-inch was cemented at 1,482 feet at Abercrombie Co.'s No. 4 King, Section 25-10-1e. Arizola Petroleum Co.'s No. 9 Tannehill, Section 36-10-1e, has 4 feet of sand topped at 1,528 feet and is waiting for a pumping rig. Beckman & Freeman's No. 2-B Urania, Section 7-10-2e, is drilling at 1,300 feet and a rig is up for No. 3-B, SE cor. SW NE, and a derrick pattern is on location for No. 4-B, 600 feet east and 200 feet north SE cor. SE NE. A derrick is up for Carter & Hurley's No. 1-C Urania, SE cor. SE SW, Section 3-9-1e. Dixie Oil Co.'s No. 8 Urania, NE cor. NE SW, Section 24-10-1e, is a rig. Six-inch was cemented at 1,550 feet at Hope Oil Co.'s No. 2 Urania, Section 19-10-2e, and a derrick is up for No. 3 Urania, 300 feet west and 150 feet south NE cor. SW SW.

H. L. Hunt's No. 1 Griswold, Section 2-9-1e, is drilling at 600 feet. Arrangements are being made to set 6-inch casing at Henry Jones' No. 1 W. Taylor, Section 23-9-1e, which has 6 feet of oil sand topped at 1,624 feet and water sand from 1,630-34 feet. Little River Oil Co.'s No. 1 Ratcliff, Section 26-10-1e, is waiting for a standard rig at 1,559 feet. Surface casing was set at 103 feet at

(Continued on Page 114)

EIGHTEEN COMPLETIONS IN MEXICO, ONE RATED GOOD FOR 30,000 BBLS.

By George Blardone
Staff Correspondent, Mexican Fields

TAMPICO, Mex., July 16.—With 18 wells completed in the week just ending, 7 can be ranked as producers with new initial production of 45,150 bbls.; and 11 go into the discard as failures. The big well of the week was Huasteca Petroleum Co.'s No. 65 Tierra Blanca, in the south fields, which came in at 2,072 feet, rated good for a flush head of 30,000 bbls. The well has 500 pounds closed pressure. The subsea level depth is 1,974 feet, which is fairly shallow for this sector.

The other pay producers were in the northern fields, with Mexican Gulf Oil Co.'s No. 23-A Lopez, in the old Panuco Field, leading the list with a production of 8,000 bbls. at a depth of 1,630 feet, a shallow well. The company's No. 26, same lease, is good for 1,000 bbls. at 1,695 feet. To continue the Panuco Field: Cia Explotadora de Riquezas Naturales, No. 1 Buena Vista, is reckoned good for 2,000 bbls. at 2,135 feet. La Corona Petroleum Co.'s No. 118 Salvasuchi is good for 250 bbls. at 1,735 feet. Up in the Ebano sector, Mexican Petroleum Co. has two nice wells, the best being No. 59 Chijol, rated 4,500 bbls. at 1,700 feet, and the other is No. 113 La Dicha, rated for 1,400 bbls. at 1,735 feet.

The Failures

In the northern fields the failures follow: La Corona Petroleum Co.'s No. 117 Ojital, Panuco, is a salt water well at 2,090 feet. Cia Pet. Franco Mexicano, No. 11 Piedras is a salt water well at 1,886 feet. Tampascos Oil Co.'s No. 22 Robles is a dry hole at 2,050 feet. Transcontinental Petroleum Co.'s No. 4 Buena Vista drilled into salt water at 2,055 feet, and in the Cacalilao sector, its No. 258, Lot 4, is a duster at 2,480 feet. Up in the Ebano sector, Mexican Petroleum has the following failures: No. 8 Silva, salt water at 2,210 feet; No. 72 La Dicha, duster at 2,205 feet, and No. 19 Mendez, salt water at 1,925 feet. In the Panuco River federal zone, National Lines has salt water in its No. 59 Barbarena at 1,655 feet, and a dry hole in its No. 43 Limon at 2,710 feet.

In the south fields, Huasteca Petroleum Co. has a dry hole in its No. 60 Tierra Blanca finished at 2,146 feet.

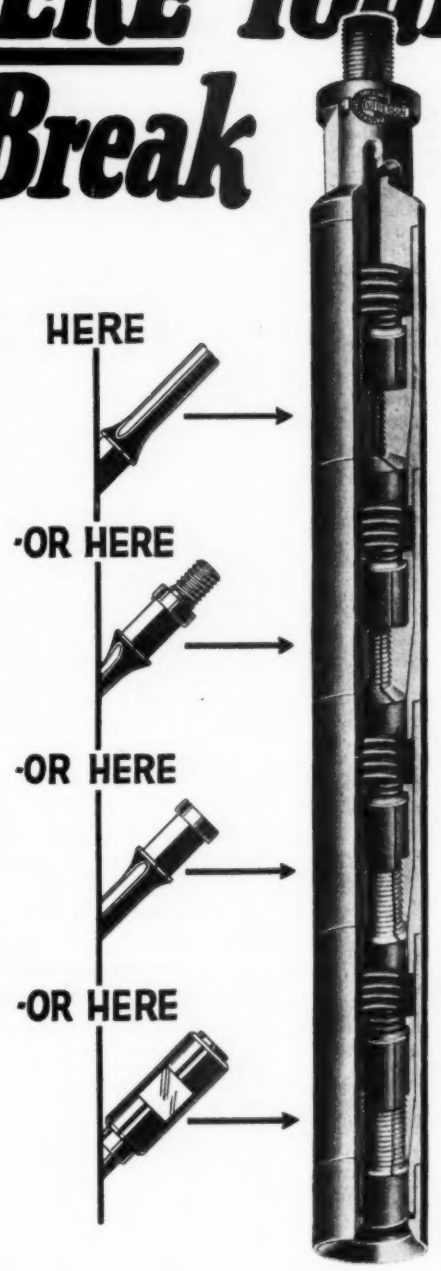
Field Operations

In the Panuco district of the northern fields drilling operations as the week ended are best reflected as follows: La Corona Petroleum Co.'s No. 82 San Manuel, Panuco's deep test, is in the Tamasopa at 3,780 feet; its 119 Delicias is in gray lime at 1,565 feet; its No. 120 Las Piedras is in gray shale at 235 feet. Cia Pet. Capuchinas No. 11, Lot 12 W. Maguabes is in gray lime at 1,474 feet; its No. 4 is in a similar formation at 2,120 feet. Cia. Pet. Franco Mexicano is in shale at 1,075 feet, and its No. 6-A Llomas y Llanos is spudding. La Espuela Oil Co.'s No. 6 Sobrevilla is in gray lime at 2,015 feet; its No. 9 Perforadores is in gray lime with shale layers at 1,170 feet. English Oil Co.'s No. 13 Tampas-

(Continued on Page 120)

No Matter WHERE Your Sucker Rods Break

The GUIBERSON Multiple Sucker Rod Socket Will Take Hold



This socket carries 4 different sets of slips, each capable of taking hold of at least 2 sizes of rods or boxes. It is thus "8 Sockets in One."

No matter what kind of an end is left projecting upward after the rods part—one of these slips will prove of the proper size to take hold.

You are practically certain to succeed with this socket on the FIRST TRIP DOWN. No need to pull out and change bowls and slips. This socket is a wonderful time, money and grief saver.

Slips are one piece, three-forked, so they cannot be pulled out and lost in the hole. Each shell is interchangeable with any other, and each set of slips fits into any shell, insuring quick replacements. Ask for our descriptive folder.

"Better Be Safe Than Sorry"

THE GUIBERSON CORPORATION
Box 1106, Dallas, Texas

CALIFORNIA OFFICE: 1506 Santa Fe Ave., Los Angeles

402 W. First St., TULSA — 318 First Nat'l Bank Bldg., HOUSTON — 506 Trust Bldg., NEWARK, O.

GUIBERSON
BETTER BE SAFE THAN SORRY

Coastal Semi-Pools Furnish Big Wells

Blue Ridge and Big Creek Contribute Producers, With West Side of South Liberty Pool Aiding Output

By P. L. McGreal
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., July 19.—True to its record of having events come in bunches, the Gulf Coast pools continue to furnish big wells. The new production for the past week was 10,000 bbls., such semi-pools as Blue Ridge and Big Creek contributing to the total. The Humble Oil & Refining Co. got a 3,000-bbl. well initial flow on the west side of the South Liberty Pool.

The gross production for the week ending July 17 is placed at 117,865 bbls., a decrease of 2,050 bbls., compared with last week. The south Texas pools are credited with 113,750 bbls. of the total and those in south Louisiana with 14,115 bbls.

Compared with last week Spindletop declined 4,000 bbls.; Hull, 400 bbls.; Sour Lake, 600 bbls.; West Columbia, 945 bbls.; Lockport, 975 bbls. The South Liberty Pool increased 1,675 bbls.; Orange, 1,150 bbls.; Goose Creek, 725 bbls.; Big Creek, 540 bbls.; Blue Ridge, 870 bbls.; Jennings, 200 bbls. and Boling 50 bbls.

The estimate for each pool is as follows:

Pool—	Gross Bbls.
Boling	2,500
Batson	1,475
Blue Ridge	1,800
Big Creek	1,600
Barber Hill	500
Dayton	60
Damon Mound	750
Edgerly (La.)	815
Goose Creek	11,925
Humble	4,000
Hull	18,400
High Island	145
Jennings (La.)	1,500
Lockport (La.)	4,900
Markham	75
Nash Dome	1,200
Orange	10,300
Pierce Junction	1,580
Piedras Pintas	80
Spindletop	24,000
Saratoga	1,580
Sour Lake	5,600
South Liberty	7,000
Vinton (La.)	6,825
West Columbia	9,065
Welsh-Anse La Bute (La.)	75
Miscellaneous	115
Total	117,865

Southwestern Fields

The estimated daily average gross for the southwestern fields for the same seven-day period is 40,040 bbls., an increase of 600 bbls. compared with last week. The daily average for each field is as follows:

Field—	Daily Av.
Luling	22,400
*Mirando	10,100
Somerset	2,040
Calliham	120
Rockdale-Minerva	970
Lockport	4,410
Total	40,040
Grand total for week	157,905
Grand total last week	159,355
Net decrease	1,450

*Includes Webb, Jim Hogg and Zapata Counties and part of Duval County.

The increase comes from the Luling and Mirando Fields. The Lockport (Lytton Springs) decreased 260 bbls.

Wells Completed

Wells completed in the Coastal Pools during the week total 21, of which 5 were dry and 3 salt water. Four were bailing at the close of the week. The new production aggregates 10,000 bbls., against 14,606 bbls. last week and 28 completions.

The following table shows in brief the result of the week's operations:

District—	Comp.	Prod.	Dry	SW.	Blg.
Boling	5	35	1	3	0
Batson	2	125	0	0	0
Blue Ridge	1	1,000	0	0	0
Big Creek	1	1,600	0	0	0
Goose Creek	1	75	0	0	2
Jennings (La.)	3	65	0	0	0
Orange	2	1,100	0	0	0
Spindletop	1	3,000	0	0	0
Sour Lake	0	0	0	0	1
South Liberty	1	3,000	0	0	0
Vinton	3	0	3	0	0
Pierce Junction	0	0	0	0	1
Miscellaneous	1	0	1	0	0
Total	21	10,000	5	3	4
Last week	28	14,606	7	4	5

Another Spindletop Well

The deep sand section at Spindletop added another producer to the list when the Rio Bravo Oil Co.'s No. 1 Texas & New Orleans Railway right of way came in flowing 3,000 bbls. at 2,785 feet, 23 gravity oil. There are now 13 producers in the deep sand area. There is very little opportunity to trade since all the probable acreage is under lease, but such few trades as have been made were at high prices. The Gulf Production Co. bought the Quinn one acre on the west, with one well flowing 3,500 bbls., for $200,000. Two more wells are drilling. The Atlantic Oil Producing Co. (Atlantic Refining Co.) took the Marrs McLean 5-acre strip about the center of the development, but the price paid is unknown. Two locations have been made. The Gulf company also bought the Jeanette Mann 5 acres at $2,500 per acre. Mrs. Mann was a former resident of Beaumont, now living in Los Angeles. She bought the land back in 1908 with the intention of building a home on it, but later tried to sell it for pasture land. She offered it for less than she paid for it, but could not find a buyer. Mrs. Mann retains an overriding royalty. W. P. H. McFadden is the largest land owner on the southeast side of the old cap rock field and the Gladys City Oil & Land Co. owns the holdings on the north and west. McFadden is a wealthy resident of Beaumont, with varied interests. The Gulf Production Co. held a 20-year lease on the Gladys City tract and drilled many productive wells on that part of it within the cap rock area. The long contract expired four or five years ago and the Gulf company renewed, retaining rights to all oil found above 1,400 feet. At that time it was believed no deep sand production would ever be developed around the old pool. The Yount-Lee Oil Co. has a lease on the oil found below 1,400 feet.

South Liberty Active

The South Liberty Pool loomed on the horizon after nearly six month of absolute dullness. The Humble Oil & Refining Co. completed No. 2 Welder on the west side of the Trinity River, opposite the old pool, at 3,870 feet, flowing 3,000 bbls. 22 gravity. It is about 8,200 feet west of the original pool. No. 1 Welder was brought in about six months ago flowing 800 bbls. No. 2 is located 500 feet north and east from No. 1. The Welder tract covers 3,100 acres. Late in the week the well was flowing 2,000 bbls., 20 per cent salt water. Five locations have been made, but it will be necessary to lay plank roads to get in material as the land is along the river bottom and overflows when the river rises. North of the old pool, the Premium Oil Co.'s No. 1 Mitchell is drilling around 3,165 feet. The Coastal Oil Co.'s No. 1 Lecoure is idle. Some operators believe the real pool is on the west side of the dome, basing their conclusions on the rapidity with which the wells in the original area on the east side of the river went to water. The pool was opened January 1, 1925, and the boom lasted about six months, after which the wells went to water and the production declined.

The best well of the week is the Gulf Production Co.'s No. 29 Davis in the Big Creek Pool, Fort Bend County, 7 miles south of Richmond. It came in flowing 1,600 bbls. with chokers on at 2,960 feet. The flow increased to 4,300 bbls. The gas pressure is unusually heavy and it is thought the well would make 7,500 bbls. if opened. The Big Creek Pool is three years old and practically all the acreage is held by the Gulf company, which opened the district.

Early in the week Abercrombie & Co. brought in No. 1 West-Schenck on the south flank of the Blue Ridge Dome at 3,290 feet flowing 1,000 bbls.

Other Completions

In the Orange Pool, the Gulf Production Co.'s No. 1 Hager-Moore is a 1,000-well at 3,600 feet. The Rex Petroleum Co.'s No. 4 Carbello is pumping 100 bbls. at 3,375 feet. The Orange Petroleum Co.'s No. 3 Winifree is bailing at 3,560 feet.

At Boling the Humble Oil & Refining Co.'s Nos. 6 and 7 Hawes are both salt water wells at 4,875 and 3,875 feet respectively. The Sun Oil Co. worked over No. 2 Floyd into a 35-bbl. well at 2,300 feet. The Vinyard Oil Co. got salt water in No. 1 Uechert on the dome at 480 feet, and the Vacuum Oil Co. abandoned No. 1 Hooper at 3,515 feet. It is the deepest test to date in the pool and is south of the production.

At Goose Creek, L. G. Marshall's No. 3 Bryan will pump at 1,742 feet after being worked over. The Humble Oil & Refining Co.'s No. 69 Smith is bailing at 2,450 feet and No. 22 Peninsula at 3,550 feet.

In the Batson Pool, the Kirby Petroleum-Capitol Oil Co.'s No. 5 Hodges, on the northwest side, is going on the beam. The Gulf Production Co.'s No. 61 Choate will make a pumper.

The Navarro Oil Co.'s No. 3 Cain at Pierce Junction is bailing at 4,075 feet.

The Yount-Lee Oil Co.'s No. 1 Lynn, in the deep sand section on the southwest side of the Sour Lake Pool, is doing the same at 4,100 feet. Same company's No. 1 Bashara staged a gas blowout at 3,710 feet. The drill stem is stuck in the hole.

Outside of the defined territory, Paggi Brothers abandoned No. 1 Jackson, a wildcat test in Chambers County, at 1,880 feet.

In the Jennings (La.) Pool, F. I. Getty's No. 2 Clement is a 20-bbl. pumper at 1,550 feet. It is a workover. The Jennings Production Co.'s No. 5 Heywood is good for 20 bbls. and the Gulf Refining Co.'s No. 30 Jennings-Clement will pump at 1,950 feet.

In the Vinton (La.) Pool, three completions all bailed salt water. The Vinton Petroleum Co.'s No. 20 Rescue got it at 3,050 feet, the Gulf Refining Co.'s No. 4 Gray at 2,300 feet and the Supreme Oil Co.'s No. 1 Jackson at 1,090 feet.

Get Small Well

The Yount-Lee Oil Co.'s No. 1 Lynn in the Sour Lake Pool is a small producer for the southwest deep sand section. It is making 100 bbls. at 4,100 feet.

The Sun Oil Co. is setting 710 feet of strainer in No. 34 River on the north side of the Humble Pool around 3,200 feet for a test in sand and shale.

Sixteen wells are now drilling in the deep sand section at Spindletop, with 12 more either rigging or with derricks over locations. "Rigging" means the rotary drill is being placed on the derrick floor and connected up. The Yount-Lee Oil Co.'s No. 7 McFadden is around 1,700 feet and No. 6 Gladys is below 1,800 feet. Derricks are up for Nos. 8 McFadden and 7 Gladys. No. 1 fee land is around 1,810 feet with No. 2 rigging and a derrick up for No. 3. No. 1 Trembly is around 2,565 feet. The Gulf Production Co.'s No. 2-A Weed is at 2,543 feet. No. 3 is rigging. No. 1 Jeanette Mann is below 2,235 feet and No. 2 at 2,235 feet. No. 1 Oakland is rigging, as is No. 1 Jack-Duff. No. 2 Hines-Quinn is rigging with a location made for No. 3. The Sun Oil Co.'s No. 2 McLean is drilling around 2,235 feet and No. 3 is rigging up. Paggi & Co.'s No. 1 Gordon is nearing the pay, drilling around 2,800 feet. Deutser's trustee No. 1 fee, is rigging. The Rio Bravo Oil Co.'s No. 2 T. & N. O. is around 565 feet with No 3 below 600 feet. The Seven Oil Co.'s No. 1 Trembly set 8¼-inch casing. Porch & Telshaw's No. 5 Trembly is at 540 feet. The Atlantic Oil Producing Co. is rigging Nos. 1 and 2 McLean, the recently purchased 5-acre lease. It is now reported the Atlantic Co. paid a bonus of $100,000 and an overriding royalty. Part of the bonus is to come out of oil.

In the Orange Pool, the Gulf Production Co.'s No. 6 Peveto is rigging. No. 11 Kishi-Lang is around 4,700 feet. No. 2 Briggs-Moore is at 3,415 feet. No. 6 Winifree is a 3,655 feet. No. 4 Hager fee is deepening at 3,455 feet and No. 24 Hager fee is drilling around 400 feet. The Humble Oil & Refining Co.'s No. 4 Winifree is fishing for liner. No. 27-B Chesson is rigging. The Texhoma Oil Co.'s No. 9 Chesson is at 2,775 feet. The Brownie Babbittee Oil Co.'s No. 12 McLean is at 2,675 feet. The Kishi Development Co. is resetting strainer in No. 7 McGuire at 3,570 feet. The Supreme Oil Co.'s No. 1 Jackson is at 3,515 feet.

Hardin County Pools

The Rio Bravo Oil Co.'s No. 5 Fountain, a deep sand completion on the north side of the Saratoga Pool, which came in last week flowing 600 bbls., is now heading 200 bbls., 50 per cent water. Same company is drilling No. 5 Cotton at 1,510 feet.

In the Batson Pool, the Houston Production Co.'s No. 1 Santa Fe is drilling below 1,210 feet. The Gulf Production Co.'s No. 1 Cruse is rigging. Derricks are standing for the Buchanan Oil Co.'s No. 89 Milhome, Gulf Co.'s No. 62 Chase and The Texas Company's No. 2 LaJarza. The latter is on the east side.

In the southwest end of the Sour Lake Pool, the Sun Oil Co.'s No. 1 Libbie is at 4,415 feet showing oil in shale and sand. The Gulf Production Co.'s No. 1-D McLean fee is around 1,780 feet. The Humphrey Corp.'s No. 2-B Bashara is at 3,510 feet. No. 1 Kelly is drilling around 1,675 feet. The Orange Petroleum Co.'s No. 1 Merchant is around 3,416 feet. Eunice and others' No. 1 is rigging. Locations have been made for the Yount-Lee Oil Co.'s No. 5 Gilbert, Lake View Oil Co.'s No. 49 Hardin and The Texas Company's No. 303 fee.

Harris County Pools

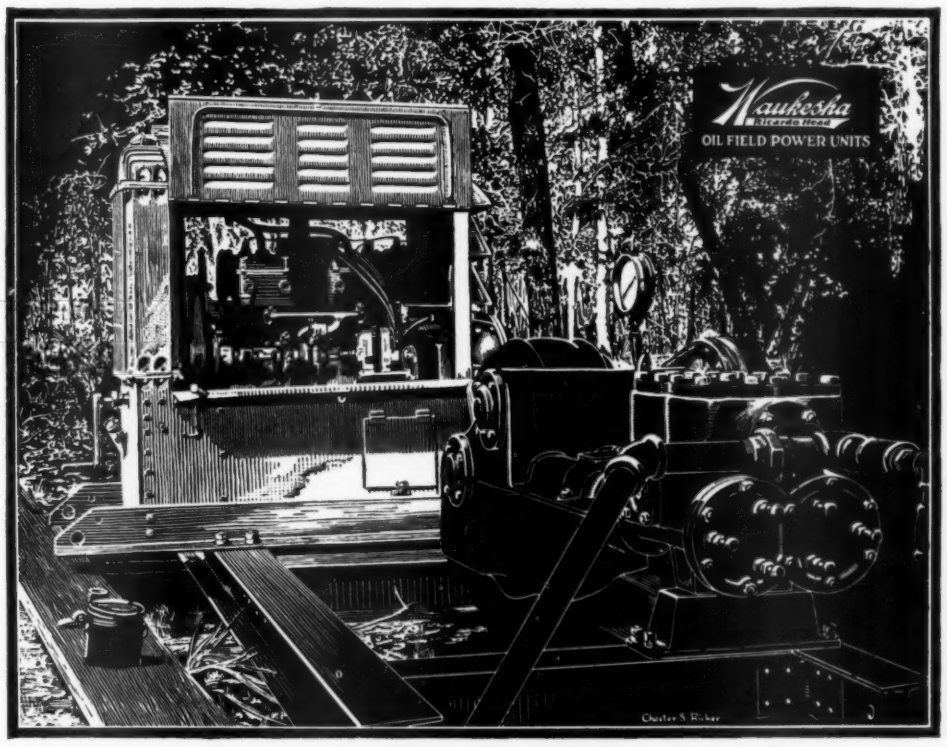
In the Goose Creek Pool, the Humble Oil & Refining Co.'s No. 10 Peninsula is working over, as is No. 12 at 3,240 feet. A derrick is standing for No. 17. No. 68 Smith is drilling around 4,870 feet. The Gulf Production Co.'s No. 25 Smith is at 455 feet. No. 34 Beaumont is rigging. No. 12 Chapman-Bryan is drilling at 4,291 feet. No. 7 Wright is around 4,455 feet. No. 6 Hirsch is at 2,675 feet. The Gulf Coast Oil Corp. is working over No. 9 Galliard. The Southern Exploration Co.'s No. 7 Freeman in the bay is rigging to work over. The M. & B. Oil Co.'s No. 8 Scorrgea is drilling below 4,419 feet.

In the Humble Pool, the H. & W. Oil Co. is drilling No. 3 Bailey. Weed and Thompson No. 3 Conway is rigging. Several old wells are being worked over.

At Pierce Junction, the Gulf Produc-

(Continued on Page 122)

A Typical Texas "Wildcat" Installation near Liberty



Driving Mud Pumps for Rotary Rigs

One of the many uses for Waukesha Oil Field Power Units is driving "mud pumps" for rotary rigs; here a unit is shown driving a 4½x10 Duplex "Mud Pump." Used independently with any "mud pump," it furnishes ample, economical power and provides a speed range to meet easily every variation in mud and depth of hole, without interfering with rotary rig speed or operation.

Every day, oil men are finding new uses for Waukesha Units—Write for the new "Oil Field Bulletin" which will be mailed gladly on receipt of your request.

OIL INDUSTRY EQUIPMENT DIVISION

WAUKESHA MOTOR COMPANY

Waukesha Wisconsin

New York	Kansas City	Denver	Tulsa	Houston	San Francisco
Aeolian Building	*V. L. Phillips Co.*	*Wilson Machy. Co.*	*C. F. Camp Co.*	*Portable Rotary Rig Co.*	*C. A. Watts*

Exclusive Builders of Heavy Duty Gasoline Engines for Over Twenty Years

New Pool Possible Near Boulder, Colo.

Repollo Oil Co. Gets 50-Bbl. Producer. Deep Test in Sunburst Field Makes Flow of High Gravity Crude

By Frank B. Taylor
Staff Correspondent, Rocky Mountain Area

CASPER, Wyo., July 17.—The Repollo Oil Co. found a well estimated as being good for 50 bbls., at 3,400 feet, near Boulder, Colo., close to the old Boulder Field. The Repollo Oil Co. is a subsidiary company of the Mammoth Oil Co. The new strike is located on Section 33-1-70. This wildcat is expected to open up a new field in the Boulder district. While the production was found in a sandy shale, and not in the Hygiene sand as was at first reported, the showing warrants further work. It is expected that the Mammoth Oil Co. and the Repollo Oil Co. will start other wells on their leases at once.

The Boulder Field, near the city of Boulder, in the county of the same name, consists of about a dozen shallow holes with a daily production of about 25 bbls. The oil is coming from a shale fault plane and some attempts have been made in the past to find the "mother pool" that is thought to feed the shale wells. The results were dusters until the present strike of the Repollo Oil Co., which indicates that this well has found the fault at a greater depth and thereby gives an indication of the direction of the flow to the shallow wells.

The Prairie Oil & Gas Co. brought in a good producer in the Lost Soldier Field in Carbon County, Wyoming, Section 11-26-90. The well is good for 1.450 bbls. with the pay at 1,850 feet. The same firm also has another producer good for 80 bbls. at 2,337 feet on the same section.

The Producers & Refiners Corp. found a black oil producer in the Hudson Field near Lander, Fremont County. This well will make 150 bbls. The depth is 1,776 feet, and the location, Section 30-2-2, of the Wind River Reservation.

The Continental Oil Co. brought in a good well on the Rattlesnake structure in northern New Mexico. This new strike is No. 18, and is estimated at 1,080 bbls. The crude is the same light grade that the other wells are producing at Rattlesnake and the new pipeline to Gallup will take care of the sudden increase in the field's production caused by this new well.

Salt Creek Normal Again

The Salt Creek Field is gradually recovering from the effects of the floods and the production of the wells is getting back to normal. Gathering lines have been repaired and the big electrical plant is again operating without hindrance from the elements. A little part of the plant went wrong from a very minor cause and as a result the big plant was shut off for a short period during the high water. The water intake of the big plant is so arranged that the water used in the boilers is screened by revolving screens as it is taken into the plant. Some drift caused one of these screens to clog and before the crews could clean it out, the rising waters of the flood shut down all attempts to remove the obstruction and eventually caused the plant to shut down for a few hours.

The gathering lines and telephone and telegraph systems suffered heaviest of all the field departments. It is estimated that the field will be back at normal by next week.

Wildcat Strikes Gas

The Ohio Oil Co. drilled into a gas sand in a wildcat well located about 25 miles north of the Wyoming line, in Stillwater County, Section 13-6-17, at 3,300 feet. The flow was found in the Dakota formation, known as the Kootenai in Montana, and was estimated at 4,000,000 feet daily. This well has been reported as the No. 2 on the Mackay structure, but it is the first deep test. No. 1 was started by the Ohio Oil Co. last summer and had a crooked hole about 1,200 feet and abandoned the well, skidding the rig for the No. 2 hole, which found the gas as stated.

The strike is within easy distance of the gas line from Elk Basin to Billings, and which is owned and operated by the Ohio Oil Co. through a subsidiary company. The Mackay structure is considered to be proven for gas with this well and the probable extent of the field is estimated at 6 square miles in area. However, the Ohio Oil Co. is expected to drill on down and make a test of the Sundance, (Ellis sand) and also of the break of the Madison lime where many wells have found indications of oil or gas in Montana.

Sunburst Field Discovery

An important discovery was made the past week in the Sunburst Field that is believed will lead to deeper drilling there of many wells. Frazer & McDonald's well on Section 17-35-1, the east side of the field, was started as a deep test. The hole reached a depth of 3,300 feet last winter and was shut down. This spring the well has made several flows, the first being heavy oil, but the later flows are showing a very high grade crude. The last few weeks the well has been making an oil similar to the very light oil found in the Turner Valley in Canada and which commands a high market because of its volatile nature and the high gasoline content.

Just where this oil is coming from is not known. When the well shut down last winter at 3,300 feet, there was about 1,400 feet of open hole and this oil may be coming from any point in that depth. The well found the break between the Ellis sand and the Madison lime dry and when the work stopped, the tools were thought to be in the Devonian formation under the Madison lime. The well stopped in a hard sand.

Other Good Wells

On top of the remarkable showing of the Frazer & McDonald well, the Ohio Oil Co. brought in a new producer on the southeast extension of the Sunburst Field that will make 300 bbls. This well is located in Section 18-34 1 and found the pay at 1,380 feet after passing through two sands that were considered the Ellis sand and which were dry here. The production is considered to be coming from a sand in the Madison lime as the Ellis and Madison break were passed through about 1,320 feet.

The O'Neil Brothers also found a well in the Madison lime in Section 27-35-2 that will make 300 bbls.

The Ohio Oil Co. brought in a new producer in the central part of the field in Section 30-35-1, finding the Ellis sand deep at 1,500 feet. The well was shot heavily and will make a small producer.

The Medford interests completed a new producer in the southeast end of the field, Section 24 34-2, that is good for 65 bbls. from the lime. This land that is now bringing in good wells was supposed to be worthless and the California Co. drilled two dusters on it and then threw up the leases.

The Montana Eaglas Oil Co. drilled a dry hole in Section 15-35-1 and failed to find any Ellis sand whatever at the Madison Ellis break. The hole went to 1,720 feet and found water.

Fifty Six Petroleum Co. drilled in a good producer that started off at 300 bbls. in the Ellis sand at 1,470 feet in Section 32-35 1 and the Homestake Petroleum Co. drilled in another producer of about 100 bbls. in the Ellis sand in Section 36-35-2 at a depth of 1,415 feet.

The Big West Oil Co. drilled in a small pumper in Section 31-35-1 that will make about 10 bbls. from the Ellis sand at 1,467 feet.

The Rice Oil Co. brought in two wells the past week. Both are located in Section 30 35-1 and found oil in the Stray and the Ellis sands. One well went to 1,460 feet and the other to 1,485 feet, and they will both make small producers.

The California Co., in Section 25 35-2, found a small producer in the Ellis at 1,500 feet and this well also found some gas in the Sunburst sand at 1,260 feet.

Flood Delays Completions

In the Salt Creek Field, the flood conditions prevented the completion of many wells that should have come in the past week. In the southern part of the field the Midwest got its first Lakota and Sundance dry hole. This well was located in Section 2-39-79, total depth 3,305 feet.

The Midwest Oil Co. has a small pumper in Section 26-40-79 at 1,490 feet, and the Midwest Oil Co. and the Associated Oil Co. have a joint well in Section 25-40-79 that will make 20 bbls. at 1,940 feet.

The Wyoming Associated Oil Co. has a producer in Section 14-40-79 in the second Wall Creek sand that will make 20 bbls.

Newlon and others, operating in the LaBarge Field in southwestern Wyoming, found a good shale producer estimated at 25 bbls. at 760 feet in Section 3-26 113.

It is rumored that The Texas Company is shipping considerable asphalt from the Casper refinery to Chicago.

Tow Creek Producer

The Texas Company has opened a new commercial oil pool in its Tow Creek Dome operation, Routt County, Colorado, 35 miles east of its Moffat Dome operation. Its No. 1 Henry Dennis was placed on the pump and made 340 bbls. the first 24 hours. The yield has increased to 448 bbls. daily, production coming from shale above the Dakota sand at 2,579 feet.

No. 1 Adair, the discovery well, was drilled into shale production in December, 1924, and placed on the pump on February 10, 1925. It has never made less than 100 bbls. daily and is yielding around 115 bbls. Three wells drilled to the Dakota sand beneath the sale found

(Continued on Page 137)

MALJAMAR'S LEA COUNTY, N. MEX., TEST SHOT; HAS HOLE FULL OF OIL

Staff Correspondent, New Mexico Fields

ARTESIA, N. Mex., July 19.—The Maljamar Oil & Gas Corp.'s No. 1 Baish, Section 21-17-32, Lea County, is standing with a hole full of oil following a shot of 500 quarts from 3,925 to 4,132 feet. The crew is cleaning out the hole a bridge having formed 200 feet from the bottom. Over 1,000 persons witnessed the shot.

The major companies continue to buy acreage with the Ohio, Pure, Texas and Humble the most active. The Humble, who in the past confined its purchases to state and fee land, has gone in for Government permit and yesterday closed a deal with Bruce Sullivan for a half interest in Section 3-10-11-15-22-23-24 and 25, in Township 18, Range 31, these permits being south of the Maljamar well.

The Texas Company also closed a deal for a one-half operating interest in 20,000 acres scattered in a southeasterly direction along the Cap Rock, owned by Henderson-Dexter-Blair. The acreage bought is the SE of Section 30, all the W half of Section 31 less the NW NW, all Section 33 and 34, Township 17, Range 33. The W half of NW, Section 6, all of Section 5, all of Section 4, N half of Section 3, all of Section 9, 10, W half of Section 11, SW NW NW SW and W half of NE, Section 15, N half and the N half of SE of Section 14, and N half and SE of S and SW NW SW, Section 13, the S half NE NW NE SE, Section 22, the S half of SW and S SE, Section 23, the NE NW S half SW NE SW E half, Section 24, all of Section 25 in Township 18, Range 33. Section 19 less the NE all of Section 30, all of Section 31 and all of Section 29 less the SE SE in Township 18, Range 34. All of Sections 3-4-5-6-7-8 less the SE SE, all of Section 9 less S half SW and all of Section 10 in Township 19, Range 33. All of Section 4 less SE SE all of Sections 5-6-7-8-9-15-22 in Township 19, Range 34.

New Sand in Artesia Pool

In the Artesia Pool, Snowden & McSweeney revived interest in the south end by picking up a new sand in their No. 2 in Section 33-18-28, which was deepened after producing for the past year. Topped at 2,540 feet the sand measured 8 feet in thickness and gave up the oil so freely that the well flowed 75 feet over the mast of the machine. It is now flowing by heads and is good for around 150 bbls. naturally. The hole will be carried down to the 2,700-foot pay encountered in the Ohio Oil Co.'s No. 6 Toomie-Allen before being shot.

The Empire has a 75-bbl producer in its No. 1 on the Russell permit in Section 35-17-27, which was shot with 70 quarts from 1,592-1,609 feet. This well opened a new extension on the west side. Another wildcat to find a sand is the Decum Development Co.'s No. 1 in Dog Canyon, Section 5-17-28, which has drilled 30 feet of pay topped at 2,280 feet. No test can be made until casing is set as the hole is standing 2,000 feet in salt water coming from 1,995-2,000 feet.

Eddy County Drilling

Colorado Drilling Co.'s No. 1 Irvin, Section 8-16-17, drilling past tools; Compton and others' No. 2 Mann permit, Section 3-18-17, drilling below 1,675 feet; Cook-Ironsides' No. 1, Section 10-20-29, drilling at 1,575 feet, 20 feet of sand carrying good showing at 1,425 feet; Decum Development Co.'s No. 1 Vandagriff permit, Section 5-17-28, drilling below 2,300 feet, 30 feet of sand topped at 2,280 feet with 2,000 feet of water in the hole; Empire Gas & Fuel Co.'s No. 1 Russell permit, in Section 35-17-27 cleaning out after shot; Flynn-Welch & Yates' No. 4 Keyes, Section 21-18-28, cleaning out after shot; No. 49, Section 3-18-28, moving in tools; No. 3 Dunn permit, Section 10-18-28, rigging up; Hasenfuss & Donley's No. 2, Section 13-18-27, dry at 2,100 feet may drill deeper; Harris & Rehn's No. 1 Winans, Section 15-18-26, drilling at 1,025 feet; Hamilton Petroleum Co.'s No. 1 Billings, Section 12-19-26, drilling depth not known; Henderson-Dexter-Blair's No. 1, Section 9-19-28, spudding; Ohio Oil Co.'s No. 2 New States Section 8-18-28, drilling at

(Continued on Page 126)

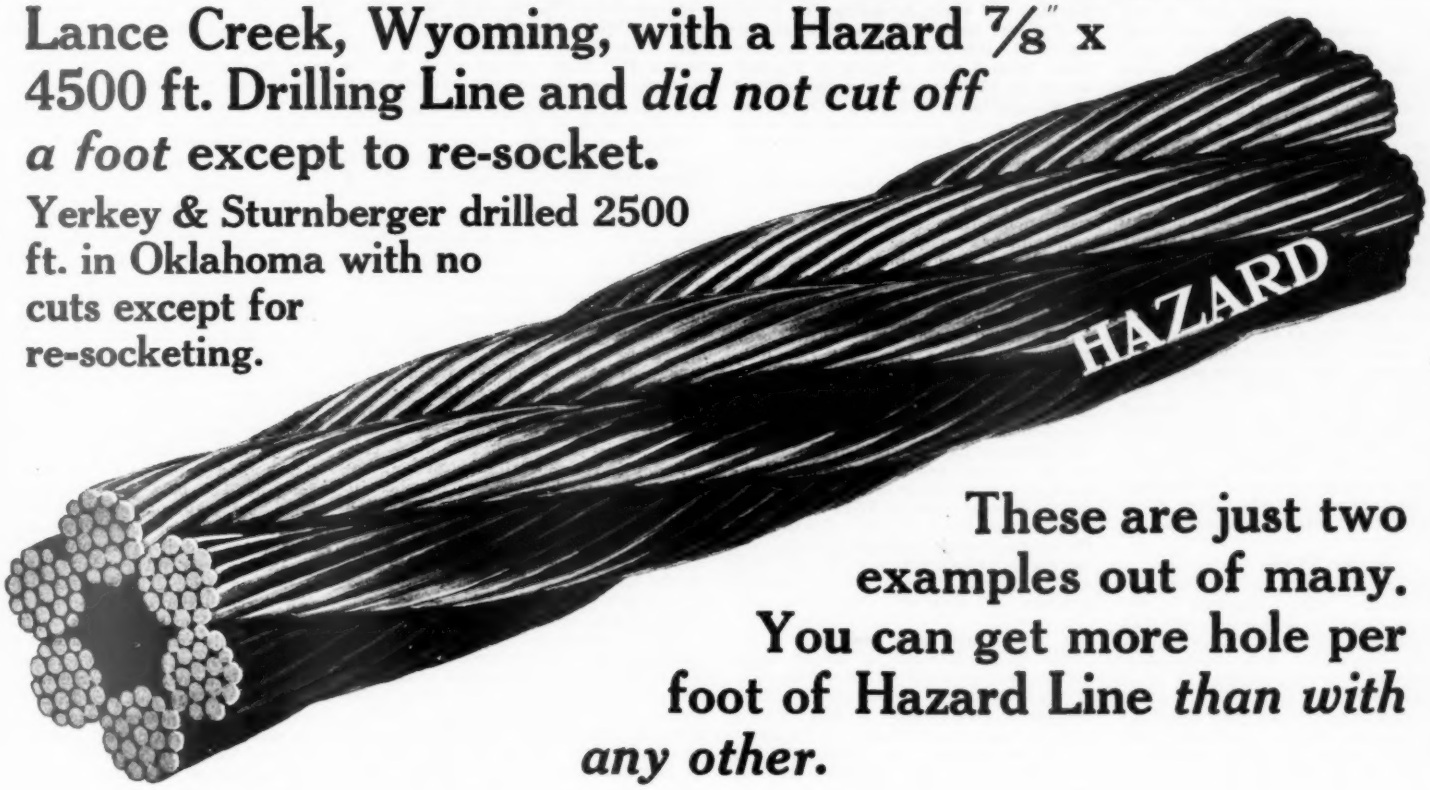
Hazard Wire Lines

For Enduring Service

Proof!

F. C. Bautch drilled 3668 ft. of hole on Bell No. 9 in Lance Creek, Wyoming, with a Hazard 7/8" x 4500 ft. Drilling Line and *did not cut off a foot* except to re-socket.

Yerkey & Sturnberger drilled 2500 ft. in Oklahoma with no cuts except for re-socketing.



These are just two examples out of many. You can get more hole per foot of Hazard Line *than with any other.*

HAZARD MANUFACTURING CO. General Office and Works: WILKES-BARRE, PA.

Tulsa Office: 1625 S. Troost Ave.

New York Pittsburgh Chicago Denver Birmingham

DISTRIBUTORS IN THE EASTERN FIELDS

CROTTY & CO. Parkersburg, W. Va.

PRICHARD SUPPLY CO. Mannington, W. Va.

DANSER SUPPLY CO. Weston, W. Va.

DISTRIBUTORS IN TEXAS, COLORADO, WYOMING, MONTANA, UTAH

LONGHART SUPPLY CO.
1st Nat'l Bank, Fort Worth, Texas

DISTRIBUTORS IN OKLAHOMA, KANSAS, and THE PANHANDLE OF TEXAS

BOVAIRD SUPPLY CO., Tulsa, Okla.
904 Mid-Continent Bldg.

Long Beach Seems to Have Passed Peak

Production Showing Decline Despite Completion New Wells. Important Extension Work at Huntington Beach

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., July 17.—A check of operations in the Long Beach Field indicates that 33 new wells, in addition to those redrilled and deepened, have been put on production in this district during the past 60 days. The small number of new wells finished is not surprising in view of the fact that most of the proven acreage has been drilled up for some time and, while there is no accurate check on the number of producers redrilled and deepened from the upper to the lower horizon in the northwest extension, it is estimated that there have been some 65 wells successfully carried down to the lower sand since the discovery by John McKeon. There have been several fairly good redrilling jobs listed during the past month or so but the number carried down and successfully finished in the McKeon zone has been considerably smaller than anticipated. As a result, the total daily field production has not shown the increase resulting from development of the part of the year. As a matter of fact, the daily production has shown a consistent decline instead of an expected increase resulting from development af the McKeon zone. Some optimists placed the field's new high at 150,000 bbls. a day and, while the writer predicted several months ago that it might reach 125,000 bbls. daily as a result of continuous development in the northwest extension, even this prognostication was 10,000 bbls. above the high point reached since development of the McKeon zone was undertaken.

Decline Offsets Gain

There are about 50 new wells and former producers being deepened in the northwest extension at the present time and, while many of them will eventually come into production, it is hardly likely that they will exert any appreciable effect on future production, as the decline which is taking place in the older section of the field is expected to just about offset that added as a result of their completion. Well logs indicate that neither the upper nor lower zone in the extension affords a satisfactory penetration and very few wells are able to maintain the initial for more than a week or ten days. Overdrilling a 50 to 80-foot sand has proven a rather costly procedure and as a result operators are using a good deal of red ink in their ledger accounts.

There were five wells finished in the northwest extension during the past seven-day period, the largest of which was Wheeler & O'Brien's No. 1 Cerritos, redrilled and deepened from the upper to the lower horizon. It came in doing 715 bbls. of 22.4 gravity oil and approximately 1,000,000 feet of gas daily from 4,825 feet. L. T. Edwards finished his No. 1 Hines Cerritos in the lower zone at 4,810 feet after redrilling and deepening it from the upper zone at 4,420 feet. This well came in flowing 410 bbls. of 22.4 gravity oil daily but, inasmuch as it only has a 50-foot penetration, it is hardly likely that this flush production will be maintained for more than a few days. W. I. Lake's No. 1 Cerritos, a deepened project finished at 4,815 feet, which came in doing 298 bbls. of clean 22.1 gravity oil, is flowing quite steadily through a ¾-inch bean under a pressure of 400 pounds.

Deepening Extension Wells

The Rio Grande Oil Co. lost very little time in redrilling and deepening the Retsof Drilling Co.'s No. 81 Cerritos and, although this well was only taken over a short time ago, it has already been returned to production. The company has succeeded in recompleting it doing 342 bbls. of 21.8 gravity oil daily in the lower sand at 4,830 feet, the hole being finished with a 4½-inch perforated liner. The Bush-Voorhies Oil Co. is deepening two wells in the extension and, unless mechanical trouble develops, both should be tanking oil within the next two weeks. No. 2 Bell Cerritos was given a preliminary production test a few days ago at 4,760 feet but it did not come up to expectations and the company has re-entered the hole and will drill ahead a little further. No. 1 Chandlee of the Apex-Calmex Oil Co. came in during the latter part of the week and registered an initial of 315 bbls. from 4,816 feet, the hole being finished with a string of 6¼-inch landed at 4,796 feet, there being no pipe of any kind below this point. The output which tests 22.9 degrees and shows a cut of 2 per cent is flowing under a pressure of 380 pounds.

George W. Johnson will begin swabbing both his Nos. 3 and 4 in the extension for production within the next day or two and, although another is just starting downward from the upper sand, it should be in a position to tap the lower zone some time within the next three weeks. The Julian Petroleum, Keck & McWhorter, Linden Oil Co., Marine Oil Corp., McGinnis & Miller, Ozark Oil Co., Robertson Company and Walter P. Temple should also appear in an early completion list. No. 1 Bixby of the California Petroleum, east of the northern part of the extension, has not yet shown anything in the way of production and the absence of any showings of oil or gas from the grass roots down to 5,310 feet makes the hole look like a duster. The General Petroleum cleaned out and reconditioned the Fisher Oil Co.'s former No. 2 Dodge and it has been returned to production pumping 245 bbls. of rather dirty 22.3 gravity oil.

Huntington Beach

The extension work of the Wilshire, Julian and Superior Oil Companies at Huntington Beach is, perhaps, the most important development in that district at the present time because of its effect on future drilling. The Wilshire's well is probably the most interesting of these three outposts located in the southwest extension recently opened up for drilling because of the fact that it is several hundred feet deeper than the other two. Reports emanating from the field indicate that the Associated has just secured a permit to run a 6-inch gathering line from its main trunk to this well, a distance of about 2 miles, and this, together with the fact that the Wilshire is erecting four 250-bbl. steel lease tanks, seems to indicate that something good is expected. The Wilshire recently tested out a showing found around the 3,100-foot level but evidently failed to develop commercial production, if unconfirmed reports are correct. The company has erected a high board fence around the rig, so the exact status of the well is unknown.

The Superior has made unusually fast footage and its No. 1 Jones has already passed the 2,900-foot mark. The Wilshire refused to release any information on the showing recently tested out but, inasmuch as the Superior's outpost is but a short distance away, the industry in general will be informed by this company as to just what the core samples show. The Julian Petroleum started work in the southwest extension before the Superior but temporarily suspended operations due to increased work at Long Beach. The company immediately resumed drilling, however, as soon as the Wilshire's well, about 1,000 feet away, encountered the upper sand.

The California Petroleum decided to test out No. 1 Buck, a north line outpost at 4,227 feet, at which depth a core sample revealed the presence of a fairly good looking sand. A string of 8¼-inch has been landed and cemented at 4,222 feet and a test will be made some time during the coming week. The Standard's deep test, No. 23, on the Bolsa Chica lease is drilling ahead at 6,141 feet and, although a slight showing was noted 100 feet higher up, nothing further has been logged since passing that depth. This company is concentrating its drilling activities principally on Lease B, where it has several wells nearing completion and, although the company is running only one string of tools on Lease A, additional work is evidently contemplated, as No. 32 is being rigged up. In No. 4 Farnsworth the Standard is spending considerable time and money in an attempt to secure commercial production but the company's efforts so far have been in vain. The well has just been put on a pumping test after being plugged back from 3,658 feet to 3,617 feet but the output, 65 bbls. daily, is still cutting approximately 50 per cent water. When the Sun Oil Co. brought in its No. 7 Wilson several weeks ago after a long hard campaign it looked as though the company had solved the water problem which has been the cause of considerable trouble in the eastern part of the field. The plug which was put in the well at 3,420 feet handled the situation very nicely for a short time but water has again broken in and the company is putting in another plug, the top of which will be around 3,320 feet.

The Chanslor-Canfield Midway Oil Co. has just finished a rather busy week at Torrance, where the company completed a new well, spudded in another and started rigging up two more. The new well just brought in was No. 45 Del Amo, drilled to 3,675 feet and finished with an 8¼-inch oil string landed on bottom. Although it only registered an initial pumping of 210 bbls. of 18.1 gravity oil, it is, nevertheless, a satisfactory completion inasmuch as it will probably experience a long life and pay out before being abandoned. No. 45, the completion, and No. 73, the new spud, are both located on the Del Amo lease somewhat removed from the discovery well located on the same property. It is believed that the Shell and Standard will each spud in a new hole within a short time, as the former has a rig standing for No. 14 Redondo, while the latter is erecting a derrick for No. 13 on Marble Lease No. 1.

Inglewood

Only a limited amount of development work is being done in the Inglewood Field at the present time due to the fact that the cream of the acreage has practically all been drilled up. There are still one or two little spots available for work but, since they are along the edge of the field, drilling will undoubtedly go along rather slowly. The Associated has one incompleted driller, No. 50 Vickers, while the Standard has one on Vickers Lease No. 2 and one each on the Baldwin Cienega and Los Angeles Investment leases. The latter has just finished reconditioning No. 32 on Los Angeles Investment Lease No. 1 and returned it to production pumping 115 bbls. of 16.3 gravity oil which cuts approximately 5 per cent. The California Petroleum cleaned out No. 1 Moynier and it is pumping 185 bbls. of 18.2 gravity oil cutting 3 per cent water and sand. The Inglewood production curve flattened out several months ago and, judging by the small number of flowing wells and the production derived from this source, it will not drop to any appreciable extent during the next 60 or 90 days. Of the 195 producing wells in the field at the present time, 20 of them are flowing approximately 11,000 bbls. a day, the blance, 175, pumping an aggregate of 38,000 bbls. daily. The flowing wells are averaging 550 bbls. per day, approximately twice that of the pumpers.

Santa Fe Springs

The Associated's No. 1 Green in the Santa Fe Springs Field justified the company's action in undertaking to recondition it some time ago. After being cleaned out to bottom, 4,620 feet, and put on a compressor, the well was turned loose with the result that it registered an initial flow of 1,155 bbls. of clean 33.9 gravity oil from the Meyer zone. It is flowing through a 1½-inch bean under a pressure of 200 pounds. The production secured was considerably higher than anticipated and it is quite possible that some further work along this line will be undertaken, as it is evident that both the Bell and Meyer zones are still far from depleted. Large production, of course, cannot be expected in every case but reconditioning work and the plugging back in some cases from the Meyer to the Bell zone should prove advantageous.

The York-Smullen Drilling Co. reports a very promising showing in No. 1 Blakeboro Simons in the Rideout Heights area of the old Whittier Field at 2,357 feet and preparations are being made to land a string of 6¼-inch around 2,250 feet preparatory to making a production test. Several new wells are expected to be spudded in at Montebello within the course of the next few weeks and, although no unusual amount of work is

(Continued on Page 121)

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Commodity—	Total This week	Daily Average	Total Last week	Daily Average	This year To date	Same time Last year
Crude oil	98,146	14,021	226,676	32,382	6,822,268	8,962,642
Fuel and gas oil	79,007	11,287	148,546	21,221	4,906,784	237,873
Gasoline	77,602	11,086	74,046	10,578	3,578,985	4,090,864
Tops	.....	.....	.....	.....	74,619	327,185
Coastwise—						
Crude oil	337,458	48,208	498,708	71,244	12,850,014	16,550,101
Fuel and gas oil	397,117	56,445	147,605	21,086	5,255,546	6,203,136
Gasoline	99,843	14,263	279,898	39,985	3,938,947	2,432,208
Kerosene	.....	.....	.....	.....	166,870	244,136
Tops	.....	.....	.....	.....	480,544	107,486
Exports—						
Crude oil	155,144	22,163	76,762	10,966	2,792,742	1,275,319
Fuel and gas oil	517,860	73,980	357,986	51,141	9,001,668	8,271,144
Gasoline	138,929	19,847	291,057	41,580	2,959,467	2,128,007
Tops	.....	.....	.....	.....	.....	170,407
Kerosene	61,015	8,716	.....	.....	1,116,575	1,114,729
TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC, GULF COAST PORTS						
Fuel and gas oil	66,029	9,461	.....	.....	650,800	160,308
Gasoline	.....	.....	.....	.....	592,094	642,672
Tops	.....	.....	.....	.....	229,775	716,079
Lubricants	.....	.....	.....	.....	217,147	235,533
Coastwise—						
Fuel and gas oil	32,810	4,688	64,003	9,143	2,598,545	1,917,335
Gasoline	74,954	10,708	151,877	21,697	2,318,232	1,380,523
Kerosene	4,609	658	9,956	1,422	216,658	124,079
Exports						
Fuel and gas oil	145,638	20,805	156,394	22,342	1,831,212	1,193,803
Gasoline	65,490	9,356	65,129	9,304	863,580	384,387
Kerosene	.....	.....	59,614	8,516	1,197,292	591,125
Lubricants	.....	.....	.....	.....	.....	293,429

The M. W. Kellogg Company

is now prepared to design and build complete oil refineries or any parts thereof.

Announcements of interest to oil refiners will follow.

Your inquiries are solicited.

THE M. W. KELLOGG CO.

7 Dey Street

New York City

BRANCH OFFICES:

700 Baltimore Ave., Kansas City, Mo.
444 Market St., San Francisco, Calif.
1019 Hellman Bank Building, Los Angeles, Calif.

Pontotoc County, Okla., Gets Producer

Section South of Canadian River, Regarded Unfavorably, May Get Good Play as Result of Latest Discovery

By J. L. Dwyer
Staff Correspondent, Oklahoma Fields

The greatest surprise which Oklahoma oil fields have received in some time was caused last week when LaSalle and others drilled in a well in Pontotoc County. This area has been considered very unfavorable to oil production, and acreage in the region of the new well has not commanded very good prices when judged by the standards established by other localities. The new well is north and slightly west of the old Beebe Pool, which was drilled almost 10 years ago, and which was uniformly unprofitable to the owners. The production in the old Beebe Pool was found at approximately 1,700 feet, and was very disappointing.

The new find has originated interest in the section, and should the well maintain a good flow it will cause many of the companies to revise their present policy of refusing to take leases south of the Canadian River. For years the Canadian River has been the line which limited the leasing activity of the oil fraternity, and leases on the south banks were available at very nominal prices.

The LaSalle well is located in the SW cor. NE, Section 28 5-5, and had a formation at 2,325 feet which has just been scratched. The well is producing 300 bbls. daily. The formation has not been definitely correlated, but it is thought to be Siliceous lime. It is possible that it is the Wilcox sand, as the Hunton lime is found in this region at a depth of 2,100 feet. The oil is a green color, and has a gravity of 38 degrees. The closest pipeline to the new field is the Oklahoma Pipe Line Co.'s line, which is 6 miles from the well.

The new well is said to be located on a structural "high" which runs northwest and southeast. Some 10 miles southeast of the new well is supposed to be the location where the Arbuckle Mountains go under the surface, and if this theory is correct, granite should be found at a very shallow depth.

Seminole Area Producer

The next important event of the past week was the well drilled by the Independent Oil & Gas Co. and others, SW cor. NE, Section 27-9-6, southwest of the Seminole Pool, opened this spring by the Indian Territory Illuminating Oil Co. in Section 24-9-6. As predicted by many, the Seminole country is coming into its own. The new well is slightly over 1 mile from the producing limits of the Seminole Pool. The Independent and others' new well has average 1,050 bbls. daily during the three days it has been producing. The sand record was 4,05159 feet, and on Monday it was drilled 2 feet deeper, and the well responded by making 112 bbls. an hour.

In another section of Seminole County, the Barnsdall Oil Co.'s No. 1 Ingram, NE cor. SW, Section 10 9-5, which swabbed 100 bbls. from lime at 4,161-70 feet. This is in the Earlsboro section of the county, which came into notice last winter when Morgan & Flynn completed a small well.

Another new area of the week is the territory between Hominy and Wynona, in Osage County, where the Tidal Oil Co. drilled in a well making 540 bbls. The new well is No. 1, SE cor. SE, Section 1-23-8, and the Wilcox sand was found 2,434-41 feet. There is no other deep sand production close by, and the Tidal find will inaugurate a drilling campaign for Wilcox oil.

The prospects of Noble County were damaged by the completion of several deep dry holes. The Champlin Refining Co.'s No. 1, SW cor. NW, Section 26-22-2w, found sand 4,970 feet and is drilling at 4,995 feet with 2,500 feet of water in the hole. The Red Bank Oil Co.'s No. 1, SE cor. SW NW, Section 16-21-2w, is shut down for orders at 4,850 feet with nothing showing, and will not be touched until the completion of the other well which the company is drilling in adjacent territory. The other well is No. 1, SE cor. SW, Section 16-21-2w, which is drilling at 4,720 feet. The Magnolia Petroleum Co. lost the hole at 3,690 feet and has skidded the rig for No. 1, NE cor. NW SW, Section 16-21-2w. This is on the properties which were purchased by the Magnolia Petroleum Co. from the Bu-Vi-Bar Petroleum Co. last fall.

Other Deep Operations

Other deep operations in this region of the State are the Marland Oil Co.'s No. 1 in Section 19-23-3w, which had sand 4,561-4,645 feet with nothing showing. Roxana Petroleum Corp.'s No. 1, SW cor. NE, Section 29-23-4, had a dry sand 4,284-4,310 feet and is drilling at 4,342 feet. H. F. Wilcox Oil & Gas Co. has a deep failure in No. 1, SE cor. SW, Section 15-23-5w, Garfield County, which is being plugged from a total depth of 4,575 feet.

During the past week the producing properties of the Jomac Oil Co. were sold to the D. W. Franchot Oil Co. and the Mid-Continent Petroleum Corp. jointly. The properties will be operated by the Franchot Co., and consist of some 735 bbls. of production located in the Bristow district of Creek County. Most all of the oil is of Dutcher sand origin, and resulted from the drilling activity of the Jomac Oil Co. three years ago. The Jomac Co. did much wildcatting in this area with good results and was one of the first companies to give the Bristow territories an intensive play. The sale price was not announced but is reported to be $1,220,000.

Production by Companies

Production of some of the pools in the State by companies and wells follow:

Burbank

Company—	Wells	Prod.
Carter Oil Co.	283	5,382
Comar Oil Co.	7	94
Mid-Continent Pet. Corp.	106	1,110
Devonian Oil Co.	16	104
Gypsy Oil Co.	193	2,451
Kewanee Oil Co.	26	204
Laurel Oil & Gas Co.	16	150
Lewis Oil Co.	21	1,315
Lorraine Petroleum Co.	15	78
Midland Oil Co.	37	498
Mid-Kansas Oil & Gas Co.	45	1,007
Peters-Oliphant	4	693
Phillips Petroleum Co.	211	12,870
Delmar Oil Co.	16	704
Phillips-Skelly	180	2,210
Prairie Oil & Gas Co.	127	2,860
Producers & Refiners	29	244
Roxana Petroleum Corp.	54	468
Seamens and others	1	5
Simmons-Moore	29	190
Sinclair Oil & Gas Co.	144	1,205
Skelly Oil Co.	31	1,280
Tidal-Osage Co.	42	482
The Texas Company	16	235
Twin State Oil Co.	24	312
Total	1,674	36,151

South Burbank

Phillips Petroleum Co.	2	327
Prairie Oil & Gas Co.	7	1,115
Sinclair Oil & Gas Co.	1	5
Midland Oil Co.	2	34
Total	12	1,481

Kay County

George S. Boles	3	191
Carter Oil Co.	11	773
Comar Oil Co.	17	973
Mid-Continent Pet. Corp.	16	714
Gypsy Oil Co.	18	303
Laurel Oil & Gas Co.	5	191
Mid-Kansas Oil & Gas Co.	10	768
Phillips Petroleum Co.	82	2,079
Prairie Oil & Gas Co.	4	64
Pure Oil Co.	4	138
Roxana Petroleum Corp.	8	358
Dye-Tomlinson	8	208
Skelly-Phillips	30	269
Sinclair Oil & Gas Co.	5	183
The Texas Company	16	139
Twin State Oil Co.	15	641
Total	192	7,887
Grand total	1,878	45,519

Tonkawa Field

Amerada Petroleum Co.	39	2,263
Blackwell Oil & Gas Co.	32	560
Carter Oil Co.	4	74
Champlin Refining Co.	2	14
Comar Oil Co.	297	14,731
Mid-Continent Oil Co. and Marland Oil Co.	23	1,805
Gypsy Oil Co.	119	7,243
Healdton Oil & Gas Co.	23	357
Wentz Oil Corp.	53	6,241
McMan Oil Corp.	2	12
Pennok Oil Co.	32	479
Phillips Petroleum Co.	3	34
Prairie Oil & Gas Co.	12	288
Sinclair Oil & Gas Co.	1	4
T. B. Slick and Comar Oil	37	1,784
The Texas Company	39	2,762
White Eagle	7	133
Total	715	38,774

Tonkawa Deep Sand

Amerada Petroleum Co.	7	1,704
Pennok Oil Co.	7	103
Comar Oil Co.	46	11,004
Gypsy Oil Co.	18	4,886
T. B. Slick	6	1,348
McMan Oil Co.	1	6
Blackwell Oil & Gas Co.	4	351
Wentz Oil Co.	15	5,336
The Texas Company	12	2,522
Mid-Continent and Marland Oil Co.	6	1,470
Total	123	28,063
Total production to date,	32,815,127 bbls.	

Garber Deep Sand

Company—	Wells	Oil	Water
Prairie Oil & Gas Co.	2	0	0
Franchot & Co.	1	31	40
Carter Oil Co.	2	94	75
Healdton Oil & Gas Co.	2	11	85
Marland Oil Co. and Mid-Continent Pet. Corp.	18	2,984	1,000
Roxana Petroleum Corp.	28	9,572	3,850
Sinclair Oil & Gas Co.	63	15,852	15,872
Total	116	28,554	20,922

MANY LOCATIONS FOLLOW GOOD WELL ON NIGGER CREEK STRUCTURE

By Special Correspondent

MEXIA, Tex., July 19.—The Transcontinental Oil Co.'s No. 1 Rossen, which opened the Nigger Creek Pool west of Mexia, coming in on Thursday afternoon, July 8, at the rate of 123 bbls. an hour, produced 2,590 bbls. in the 24 hours ending Sunday at 8 a. m., 10 days after it started flowing. The Transcontinental Oil Co. claims there is on appreciable amount of water with the oil, and that the temperature of the crude has never been alarmingly high. As high temperatures and more or less water with the oil is a common thing in the Mexia Fault area, there has been no condition arising in the Nigger Creek discovery well that should worry the operating companies there.

Many locations have been made for tests in the Nigger Creek district and already the work of building derricks is well along. Locations have been made by the Transcontinental Oil Co. directly north of the discovery well on a 25-acre lease; for No. 2 Rossen, directly west of No. 1, and for two wells on another A. E. Rossen tract just west of the discovery tract; two locations on the tract south of that and four locations on the north line of the two tracts farther west, all of which are Rossen tracts. Rossen & Thompson, E. L. Smith Oil Co., Murchison & Fain and Hollman & Goodman, will test out territory within half a mile southwesterly from the discovery well and E. L. Smith Co. has two locations made on the big Rossen 1,073-acre tract about 1,200 and 1,500 feet easterly from the Navasota River; Transcontinental Oil Co. has a location on the Negro churchyard close to the road on the Amelia Medlock farm just east of the Navasota River. Foster & Reiter made a location on one of its leases on the Mrs. Lillian Erskine 94-acre tract about 4,500 feet south and about 1,100 feet west of the discovery well. Northerly and easterly from Transcontinental Oil Co.'s No. 1 Rossen, the Transcontinental and the Pure Oil Co. each has a line of offset locations on several 25-acre tracts which will give the territory play inclining to the east. Cranfill & Reynolds and J. K. Hughes Oil Co. are also playing this trend on small pieces of acreage. On the same small lease on which the first well came in, the Transcontinental is playing the south end of it with two prospective tests. Moss & Keeling have two locations on a small tract about 700 feet north and west of this discovery well. Some difficulty is experienced in giving locations of wells because no two maps which the correspondent has seen have been drawn alike, which confuses the situation in keeping tabs on the new work.

The Transcontinental Oil Co.'s No. 1 Cochrum, an easterly offset to No. 1 Rossen, has been standing with pipe set on top of the sand and will be ready to drill in this week. The company is considering a petition to the Texas Railroad Commission to issue an order requiring a longer period than 72 hours for cement to set. It favors a 10-day wait from the time cement is run until the well is drilled in to assure a complete set. Because of this attitude there was some uncertainty as to when the company would complete the Cochrum test.

The Nigger Creek district is populated by negro farmers, and most of the land in that area is owned by negroes.

Northern Oklahoma Wildcats

Kay County

Mississippi Valley Oil Co.'s No. 1 Atkinson, SE cor. SE, Section 18-29-3w, drilling at 1,320 feet. Marland Oil Co.'s No. 1 Olson, NE cor. NE, Section 13-29-2w; casing at 3,987 feet. Strosnyder and others' No. 1 Smith, SW cor. NW NW, Section 25-29-1, drilling at 3,100 feet. Moore Oil Co.'s No. 1 Wood, SE cor. SE, Section 4-28-2w, drilling at 2,945 feet. Mississippi Valley Oil Co.'s No. 1 Smith, SW cor. SW, Section 20-28-2w, fishing at 4,483 feet. McComas and others' No. 1 Wolf, NE cor. SW, Section 6-28-1, fishing at 2,675 feet. Oklahoma Northern Oil & Gas Co.'s No. 1 Lowery, NE cor. SW, Section 11-28-1, fishing at 2,265 feet. John Stark and others' No. 1 Huddleson, SE cor. NE SE, Section 28-28-1, a rig. Davis Drilling Co.'s No. 1 Street, NE cor. NE, Section 31-28-3, straight reaming at 3,800 feet. Una Lee Oil Co.'s No. 1 Johnson, NE cor. NE, Section 18-27-1w, shut down at 3,516 feet. Marland Oil Co.'s No. 1 Cade, NE cor. NW, Section 31-27-1w, drilling at 2,290 feet. Mississippi Valley Oil Co.'s No. 1 Balzar, NW cor. NE, Section 3-27-2, fishing at 3,427 feet. Mummert Drilling Co.'s No. 1 Harper, SW cor. NE Section 26-27-2, spudded. Tom Palmer and others' No. 1 Barclay, NE cor. NW, Section 28-26-1w, straight reaming at 2,735 feet. A. D. Morton and others' No. 1 Keathley, NW cor. SE, Section 21-26-1, a rig. Ponca Lee Oil Co.'s No. 1 McNeil, NW cor. NE, Section 32-26-2, drilling at 2,225 feet.

Grant County

Otstot Development Co.'s No. 1 Snyder,

XUM

NE cor. NE, Section 6-28-3w, drilling at 3,312 feet. Wrightsman and others' No. 1 Lehring, SW cor. SE NW, Section 19-28-3w, drilling at 2,630 feet. Marland Oil Co.'s No. 1 School Land, SW cor. NW, Section 36-28-3w, fishing at 3,865 feet. J. V. Bailey and others' No. 1 Custard, C SE, Section 4-27-3w, a location. Flannigan, Dedman & Hennage's No. 1 Barnard, SW cor. SW, Section 6-27-3w, drilling at 1,200 feet. Brazil & Moss, No. 1 Royce, SW cor. NW, Section 34-26-4w, shut down at 550 feet. Flannigan, Dedman & Hennage's No. 1 Sherer, NE cor. SW, Section 16-26-3w, collapsed casing at 1,605 feet. Gypsy Oil Co.'s No. 1 Muegge, SE cor. NW, Section 33-26-3w, running 6-inch casing at 4,917 feet.

Noble County

D. W. Moore and others' No. 1 Coulter, NE cor. SW, Section 18-24-2w, drilling 3,070 feet. Wilkins & Kors' No. 1 Kirby, SE cor. NE, Section 22-24-2w, shut down at 450 feet. George Miller's No. 1 Miller, NE cor. NE, Section 1-24-1, drilling at 2,940 feet. Independent Oil & Gas Co. and others' No. 1 Miller, SE cor. NE SE, Section 9-24-1, drilling at 2,267 feet. K-D Oil Co.'s No. 1 Stephenson, SE cor. NW, Section 1-22-2w, spudded. Hartman & Skaer's No. 1 Pfrimer, NW cor. NW, Section 18-22-2w, casing at 3,635 feet. Skelly Oil Co. and others' No. 1 Tillman, SW cor. NW, Section 13-22-2, cleaning out at 3,337 feet. Red Bank Oil Co.'s No. 1 Hoffman, SE cor. SW SW, Section 16-21-2w, fishing at 4,795 feet. No. 1 Treman, SE cor. NW NW, Section 16-21-2w, shut down at 4,858 feet. Magnolia Petroleum Co.'s No. 1 Reynolds, NE cor. NW NW, Section 21-21-2w, drilling at 4,555 feet. R. L. Corley's No. 1 Williams, SE cor. NE SW, Section 7-21-1w, shut down at 1,076 feet.

Pawnee County

Magnolia Petroleum Co.'s No. 1 Gilbert, NE cor. NE, Section 30-23-3, drilling at 470 feet. Camplin Refining Co.'s No. 1 Wolfe, NE cor. SE, Section 5-22-3, swabbed 60 bbls. from lime at 4,145-69 feet and will be shot.

Harper County

Waters and others' No. 1 No Name, NE cor. NE, Section 30-29-22w, a rig. Hoffer Oil Co.'s No. 1 Cooper, NW cor. SE, Section 14-29-22w, underreaming at 3,510 feet.

Ellis County

Utility Oil & Gas Co.'s No. 1 Meehan, NE cor. SE, Section 32-24-24w, shut down at 310 feet.

Garfield County

J. C. Martin's No. 1 No Name, SE cor. NW, Section 9-24-6w, a location. H. F. Wilcox Oil & Gas Co.'s No. 1 Zalondek, SE cor. SE, Section 22-24-6w, collapsed casing at 3,830 feet. Sinclair Oil & Gas Co.'s No. 1 Meyers, SE cor. NE, Section 16-24-4w, underreaming at 2,814 feet. Shaffer Oil Co. and Gardner Petroleum Co.'s No. 1 Brinken, NW cor. NE, Section 32-24-4w, drilling at 4,125 feet. Sagar Oil Co.'s No. 1 Garusch, SE cor. SE, Section 14-24-3w, fishing at 2,546 feet. Failing & Lawson's No. 1 Disney, NW cor. NW, Section 24-24-3w, a rig. Jack Reid and others' No. 1 Dyche, NW cor. SE, Section 17-23-8w, shut down at 620 feet. Katherine Oil Syndicate's No. 1 Cox, NW cor. NW, Section 26-23-7w, shut down at 3,220 feet. Weir & Wood's No. 1 Hess, SE cor. NW, Section 6-23-6w, shut down at 500 feet; the tools have been moved away. H. F. Wilcox Oil & Gas Co.'s No. 1 Hennessy, SE cor. SW, Section 15-23-5w, drilling at 4,575 feet. Otstot Development Co.'s No. 1 Nelson, NE cor. SW, Section 36-23-5w, rig on the ground. Haley, Garber & Pulse's No. 1 Chevalier, NW cor. SW, Section 6-23-4w, underreaming at 3,135 feet. Roxana Petroleum Corp.'s No. 1 Bunker, SW cor. NE, Section 29-23-4w, drilling at 4,350 feet. Bu-Vi-Bar Petroleum Co.'s No. 1 Johnson, SW cor. SW, Section 31-23-4w, rigging up standard tools at 3,590 feet. Failing & Lawson's No. 1 Cart, NW cor. SW NW, Section 35-23-3w, shut down at 2,280 feet. Ashley & Kerr's No. 1 Swinney, NW cor. NW, Section 3-22-4w, shut down at 470 feet. Frantz and others' No. 1 Mont, NE cor. SW, Section 2-21-7w, shut down at 3,400 feet. Tidal Oil Co.'s No. 1 Smith, SE cor. SE, Section 12-21-5w, drilling at 4,298 feet. E. A. Summers' No. 1 Vanderwork, NE cor. NW, Section 31-21-5w, shut down at 1,605 feet. Beople and others' No. 1 fee, NW cor. NE, Section 11-21-4w, a rig. No. 1 Shriver, CEL SW SW NE, Section 12-21-4w, shut down at 1,850 feet. R. B. Pender's No. 2 Cain, NE cor. SE SE, Section 5-21-3w, drilling at 1,750 feet. Imo Oil Co.'s No. 1 Woods, NE cor. NW NW, Section 6-21-3w, swedging casing at 1,775 feet. R. B. Pender's No. 1 Bowers, NW cor. NW, Section 9-21-3w, drilling at 1,420 feet. T. B. Slick and others' No. 1 Detweiller, NW cor. SE, Section 22-21-3w, drilling at 4,470 feet. J. Garfield Buell and others' No. 1 Secor, NW cor. SE, Section 11-20-8w, drilling at 4,720 feet. Sinclair Oil & Gas Co.'s No. 1 fee, SW cor. NE, Section 2-20-5w, drilling at 4,095 feet.

Woodward County

Diamond Drilling Co.'s No. 1 Nordyke, SW cor. SW, Section 4-23-17w, a rig. Sharon Oil Co.'s No. 1 Elmore, SW cor. SW, Section 25-21-21w, drilling at 200 feet.

Major County

T. B. Slick and others' No. 1 Gray, C NW, Section 36-21-11w, drilling at 2,669 feet. The Texas Company's No. 1 Basin, SW cor. SW, Section 36-22-14w, shut down at 200 feet.

Kingfisher County

Max Kelly and others' No. 1 Kelly, SE cor. SW SW, Section 16-19-5w, a location. Marland Oil Co.'s No. 1 Robbins, SW cor. NW, Section 12-18-5w, rigging up standard tools at 3,555 feet. Petroleum Engineering Core Drilling Co.'s No. 1 Canfield, NW cor. SE, Section 6-16-7w, core drilling an old hole at 625 feet. McKenna, Crawford and others' No. 1 Strugeon, NE cor. SW, Section 27-16-6w, drilling at 215 feet. Hoffman and others' No. 1 Otis, NW cor. NE, Section 20-15-8w, a rig. Reiter-Foster Oil Co.'s No. 1 Davidson, SW cor. SW, Section 23-15-5w, a rig.

Logan County

Roxana Petroleum Corp.'s No. 1 No Name, SW cor. NE SE, Section 30-19-4w, a rig. Bryan & Emery's No. 1 No Name, NW cor. SE, Section 33-19-4w, shut down at 1,660 feet. The Carter Oil Co.'s No. 1 Rogers, SW cor. NE SW, Section 32-19-3w, setting surface casing. Franklin Oil Association's No. 1 Moore, SW cor. NE SE, Section 28-18-3w, straight reaming at 3,127 feet. Santrock Drilling Co.'s No. 1 Matthews, SW cor. NE, Section 11-18-3w, a rig. Haley and the Pioneer Petroleum Co.'s No. 1 Quier, SW cor. NE, Section 33-18-3w, rig burned down. Zingery & Bailey's No. 1 Baker, NW cor. NE, Section 5-17-1w, a rig. T. B. Slick's No. 1 Bery, SW cor. SE, Section 28-17-1, drilling at 1,835 feet. Blackford Oil & Gas Co.'s No. 1 Lair, CSL north half SE, Section 28-16-1w, shut down at 1,675 feet. W. R. Ramsey's No. 1 Ames, SW cor. NW, Section 24-15-3w, rig and tools.

Oklahoma Panhandle
Cimarron County

W. R. Ramsey's No. 1 No Name, NW cor. NE, Section 27-5-5, a rig. Fenton & Flowers' No. 1 Smaltz, SE cor. NE NE, Section 2-2-9, a rig.

Texas County

M. M. Valerius and Prairie Oil & Gas Co.'s No. 1 Hovey, SE cor. SE, Section 32-5-12, drilling at 2,760 feet. H. F. Wilcox Oil & Gas Co.'s No. 1 Hovey, SE cor. SE, Section 21-4-14, 4,000,000 feet of gas in sand at 2,572-2,717 feet, water at 2,771 feet, and the well is drilling at 3,075 feet. Valerius Oil & Gas Co.'s No. 1 Zea, NW cor. SW, Section 18-3-12, drilling at 2,545 feet. H. F. Wilcox Oil & Gas Co.'s No. 1 Zea, SW cor. SE, Section 28-3-13, cementing casing at 3,004 feet. Reiter-Foster Oil Co.'s No. 1, SE cor. SW, Section 9-3-15, casing parted at 1,300 feet. No. 1, C NE Section 10-2-11, drilling at 1,600 feet. Connelly and others' No. 1 Graves, SW cor. SW, Section 23-2-18, spudded. Haley, Garber & Pulse's No. 1, SE cor. SE, Section 4-1-12, fishing at 1,195 feet. Connelly and others' No. 1, SE cor. NW, Section 23-1-19, spudded.

Seminole County

In the Cromwell Pool, the Sinclair Oil & Gas Co.'s No. 9, SW cor. SE SE, Section 33-11-8, had sand at 1,845-61 feet and made 90 bbls. after a shot of 10 quarts.

The Amerada Petroleum Corp.'s No. 6, C south half NW, Section 5-7-8, had the deep sand at Wewoka at 4,147-80 feet and made 175 bbls. the first three hours. No. 8, NW cor. SE NW, Section 5-7-8, made 1,050 bbls. the first 20 hours from sand at 4,142-65 feet. No. 9, CSL NE, Section 5-7-8, made 1,640 bbls. naturally from sand at 4,172-4,200 feet. Dixie Oil Co.'s No. 3, SW cor. NW NE, Section 5-7-8, made 1,430 bbls. from sand at 4,188-4,204 feet. Independent Oil & Gas Co.'s No. 2, NE cor. NW SW, Section 5-7-8, had sand at 4,184-4,205 feet and made 400 bbls. Magnolia Petroleum Co.'s No. 6, NW cor. SW NW, Section 5-7-8, made 1,524 bbls. from sand at 4,167-72 feet. No. 7, CEL SW NW, Section 5-7-8, had an initial production of 960 bbls. from sand at 4,193-4,200 feet.

The Carter Oil Co.'s No. 1, SW cor. NW NE, Section 24-9-6, made 90 bbls. from sand at 3,928-58 feet. Indian Territory Illuminating Oil Co.'s No. 2, NW cor. SW NE, Section 24-9-6, made 120 bbls. naturally from sand at 3,934-68 feet. Mid-Continent Petroleum Corp.'s No. 1, NE cor. SE SW, Section 24-9-6, is good for 1,480 bbls. from sand at 3,915-55 feet. T. B. Slick's No. 1, SE cor. SW SE, Section 7-9-8, made 105 bbls. from sand at 3,241-67 feet after a shot of 40 quarts.

New Work in Seminole County

Magnolia Petroleum Co.'s No. 1, NW cor. SW, Section 11-9-5, is drilling at 750 feet. Indian Territory Illuminating Oil Co.'s No. 7 Dyer, NW cor. SW SE, Section 24-9-6, is rigging up. T. B. Slick has a rig up for No. 2 Cobb, NE cor. SW SE, Section 7-9-8. Winona Oil Co. has a rig up for No. 2 Harjo, NE cor. NW NE, Section 18-9-8. Prairie Oil & Gas Co. is rigging up to drill an old well deeper in No. 2 Salinda, SE cor. SW NE, Section 31-8-8. Magnolia Petroleum Co. is drilling at 750 feet in No. 1, NW cor. NW, Section 20-7-5. Dixie Oil Co. has the rig up for a twin well in No. 2-A Garner, NW cor. NE, Section 5-7-8. Prairie Oil & Gas Co. and others are drilling at 600 feet in No. 1, C SW SE, Section 11-7-8. Amerada Petroleum Co. has a rig on the ground for No. 2 Mungo, SW cor. SE NW, Section 28-10-6. Barnsdall Oil Co. is drilling at 450 feet in No. 4, NW cor. SE NW, Section 24-9-6. Amerada Petroleum Corp.'s No. 1, NE cor. NW SW, Section 34-9-6, is drilling at 500 feet. Independent Oil & Gas Co.'s No. 1, SE cor. NW SE, Section 7-9-8, is spudded. Mid-Continent Petroleum Corp.'s No. 2, SE cor. SW, Section 7-9-8, is spudded.

McIntosh County New Work

J. A. Sheppard is drilling at 1,000 feet in No. 1 Barnett, SW cor. NE, Section 2-12-16.

Okfuskee County New Work

Cooper & Donnelly and the Barnsdall Oil Co. have a rig on the ground for No. 1 Micco, NE cor. NW NE, Section 7-13-10. E. R. Black and others have dug the cellar for No. 1 Deer, NW cor. NE NE, Section 10-13-10. Independent Oil & Gas Co. and the Anglo-Texas Oil Co. have spudded No. 13, C south half NW NE, Section 13-12-11. Josey Oil Co.'s No. 13, SE cor. SW NW, Section 33-12-11, is drilling at 800 feet. Conti-

(Continued on Page 127)

WELL MAKING 150 BBLS. OPENS POOL IN BUTLER COUNTY, KANSAS

By J. L. Dwyer
Staff Correspondent, Kansas Fields

A new pool was opened last week north of Keighley, in Butler County, Kansas, by the Gypsy Oil Co., the White Eagle Oil Co. and others in No. 1 Feward, SE cor. SW, Section 12-27-7. The Bartlesville sand was found 2,638-69 feet, and the hole has 400 feet of oil standing. The well probably will be shot. It is estimated at 150 bbls. This well is 2½ miles from production, and may prove up that much territory.

In northern Cowley County, the J. A. Hull Co. has another well in No. 4 Bartlow, NW cor. NW, Section 19-32-5. There is a hole full of oil from sand the depth of which is not available, and the well will be shot.

Greenwood County New Work

Manhattan Oil Co. and Phillips Petroleum Co. are drilling at 750 feet in No. 3, NE cor. NW SE, Section 25-23-8. The Texas Company has spudded No. 1, NW cor. NW, Section 36-23-8. Skelly Oil Co. is drilling at 450 feet in No. 7, NE cor. SW NE, Section 15-23-9. No. 4, NW cor. NW, Section 15-23-9, is drilling at 400 feet. White Eagle Oil Co. and others have spudded No. 2-A, NW cor. SE SE, Section 19-23-9. Empire Gas & Fuel Co. has a rig on the ground for No. 9 Hines, SW cor. NE SW, Section 11-22-11. White Drilling Co. has spudded No. 1, NW cor. SW SE, Section 13-22-11. Empire Gas & Fuel Co.'s No. 6, NW cor. SW SW, Section 14-22-11, is drilling at 650 feet. The rig is built for No. 11, NE cor. SE NW, Section 14-22-11. No. 5 Frankhouser, SE cor. SW SE, Section 4-22-12, is spudded. Simmons and others have spudded No. 2, NE cor. SW NE, Section 4-22-12. Pure Oil Co. has a machine up for No. 5 Oliver, NE cor. SE SE, Section 8-23-11. The Texas Company and others have spudded No. 3, SE cor. NW SE, Section 8-23-11. Simmons and others have a rig built for No. 5 Tiffany, SW cor. NW SW, Section 9-23-11. Darby and others have a rig for No. 2 McGilvray, SE cor. NE NE, Section 17-23-11. Empire Gas & Fuel Co. has a rig up for No. 1 Atyeo, NE cor. NW Section 6-22-10. No. 9 Atyeo, SE cor. NW NW, Section 6-22-10, is drilling at 750 feet. The rig is up for No. 11 Atyeo, NE cor. SW, Section 6-22-10. The rig is also up for No. 3 Jones, NW cor. SE, Section 6-22-10. Phillips Petroleum Co. is drilling at 650 feet in No. 1, NE cor. NE, Section 11-22-10. No. 7, SE cor. NE SW, Section 12-22-10, is drilling at 1,050 feet. White Eagle Oil Co.'s No. 1, NW cor. SW NW, Section 1-23-9, is drilling at 1,250 feet.

Empire Gas & Fuel Co.'s No. 4, CEL SE SW, Section 29-23-10, is drilling at 600 feet. The rig is up for No. 5 Thrall, SW cor. SW, Section 29-23-10. Callahan and others have a rig up for No. 1 Hubbard, NW cor. SW, Section 10-22-13. Simmons & Rhodes have rigged up a machine for No. 1 Ott, SE cor. SW, Section 29-22-13. Parrish and others are shut down at 870 feet in No. 1 Burris, SW cor. NW, Section 16-23-13. Mid-Continent Petroleum Corp. is drilling at 750 feet in No. 6, SE cor. NW NE, Section 28-23-13. A machine is rigged up for No. 12 Dillinger, NE cor. SW NE, Section 29-23-13. Phillips Petroleum Co. has the rig up for No. 1 Hixon, SE cor. NE SE, Section 25-24-10. Manhattan Oil Co. has a rig up for No. 1 Lozier, NE cor. SE, Section 36-24-10. No. 3, NW cor. SE NE, Section 19-24-11, is drilling at 650 feet. Ward McGinnis and others are drilling at 1,400 feet in No. 5, SE cor. NW SW, Section 30-24-11. No. 5, NE cor. SW SW, Section 30-24-11, is drilling at 650 feet. The rig is on the ground for No. 8 Wiggins, NW cor. SW SW, Section 30-24-11. Peerless Oil & Gas Co. has spddded No. 1 Garrison, NW cor. NE, Section 33-24-11.

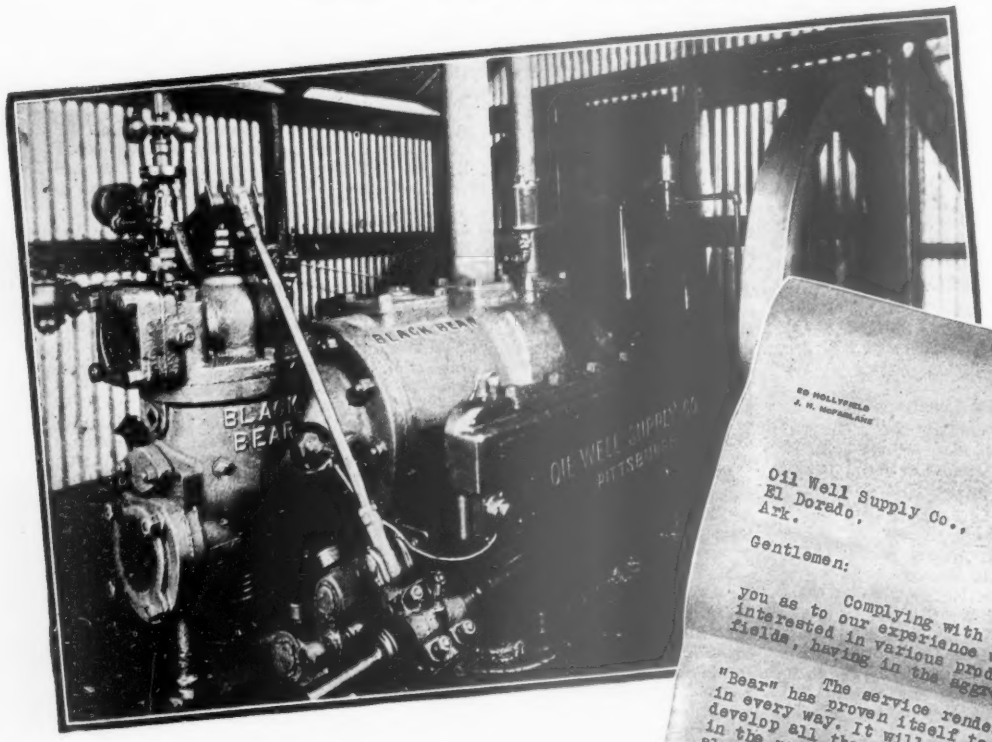
Greenwood County New Work

Syndicate Oil Co. has spudded No. 2,

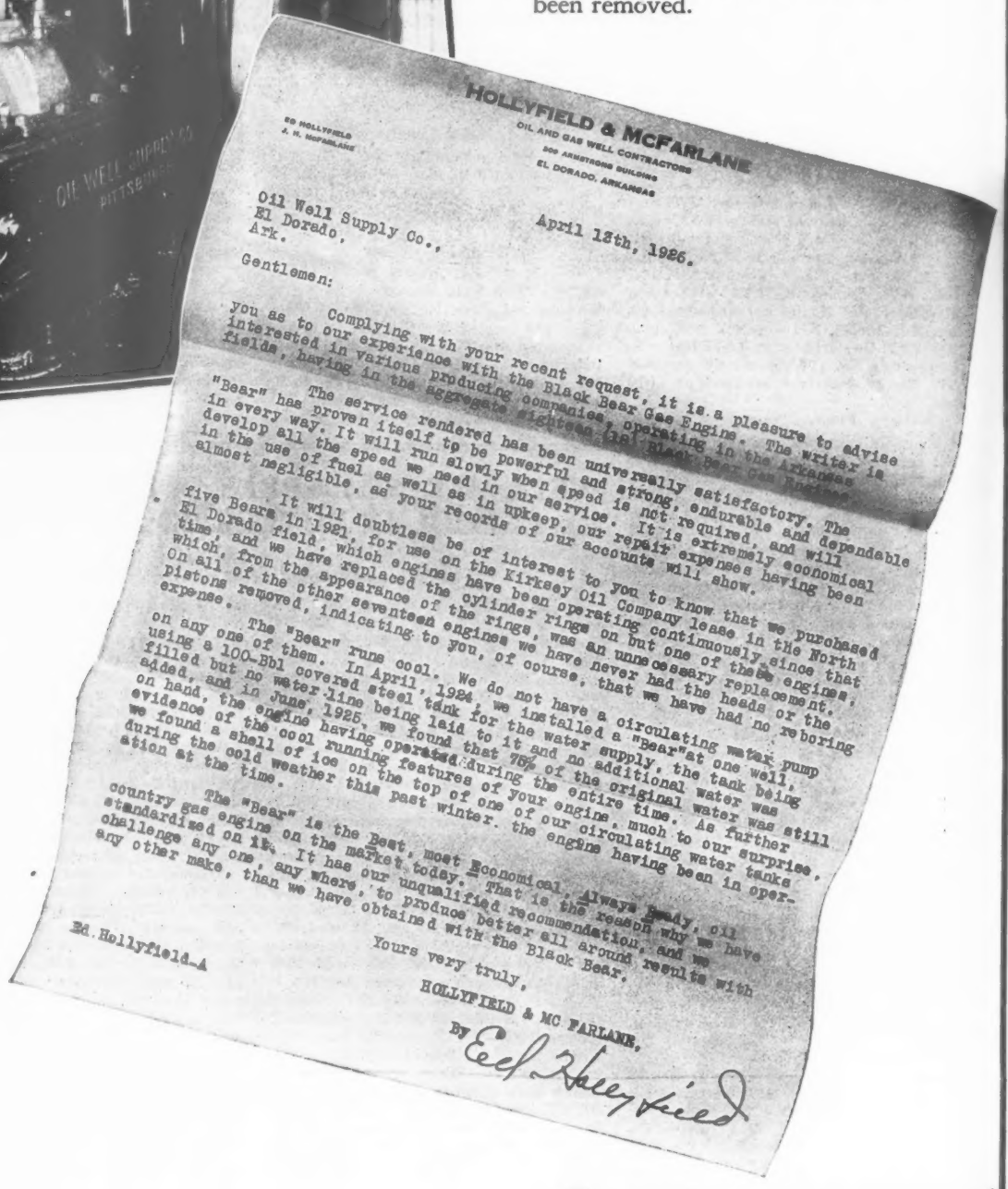
(Continued on Page 126)

XUM

"OILWELL"
BLACK BEAR GAS ENGINES



To the left is shown one of the five (5) Black Bears which has given Hollyfield & McFarlane continuous service since 1921, and from which neither the piston nor piston rings have ever been removed.



HOLLYFIELD & McFARLANE
OIL AND GAS WELL CONTRACTORS
308 ARMSTRONG BUILDING
EL DORADO, ARKANSAS

April 13th, 1926.

Oil Well Supply Co.,
El Dorado,
Ark.

Gentlemen:

Complying with your recent request, it is a pleasure to advise you as to our experience with the Black Bear Gas Engine. The writer is interested in various producing companies, operating in the Arkansas fields, having in the aggregate eighteen (18) Black Bear Gas Engines.

The service rendered has been universally satisfactory. The "Bear" has proven itself to be powerful and strong, enduring and dependable in every way. It will run slowly when speed is not required, and will develop all the speed we need in our service. It is extremely economical in the use of fuel as well as in upkeep, our repair expenses having been almost negligible, as your records of our accounts will show.

It will doubtless be of interest to you to know that we purchased five Bears in 1921, for use on the Kirksey Oil Company lease in the North El Dorado field, which engines have been operating continuously since that time, and we have replaced the cylinder rings on but one of these engines, which, from the appearance of the rings, was an unnecessary replacement. On all of the other seventeen engines we have never had the heads or the pistons removed, indicating to you, of course, that we have had no reboring expense.

The "Bear" runs cool. We do not have a circulating water pump on any one of them. In April, 1924, we installed a "Bear" at one well, using a 100-Bbl covered steel tank for the water supply, the tank being filled but no water line being laid to it and no additional water was added, and in June, 1925, we found that 70% of the original water was on hand, the engine having operated during the entire time. As further evidence of the cool running features of your engine, much to our surprise, we found a shell of ice on the top of one of our circulating water tanks during the cold weather this past winter. the engine having been in operation at the time.

The "Bear" is the Best, most Economical, Always Ready, oil country gas engine on the market today. That is the reason why we have standardized on it. It has our unqualified recommendation, and we challenge any one, any where, to produce better all around results with any other make, than we have obtained with the Black Bear.

Ed.Hollyfield-A

Yours very truly,
HOLLYFIELD & MC FARLANE,
By Ed Hollyfield

BLACK Bears are four-cycle engines and are made in 25, 35 and 40 H. P. Can be furnished to operate on gas or gasoline. Also with enclosed crankcase and force feed lubrication, if so desired.

Inquire at any of ou

"OILWELL" ESTD 1862 C O THADE MARK (REGISTERED)

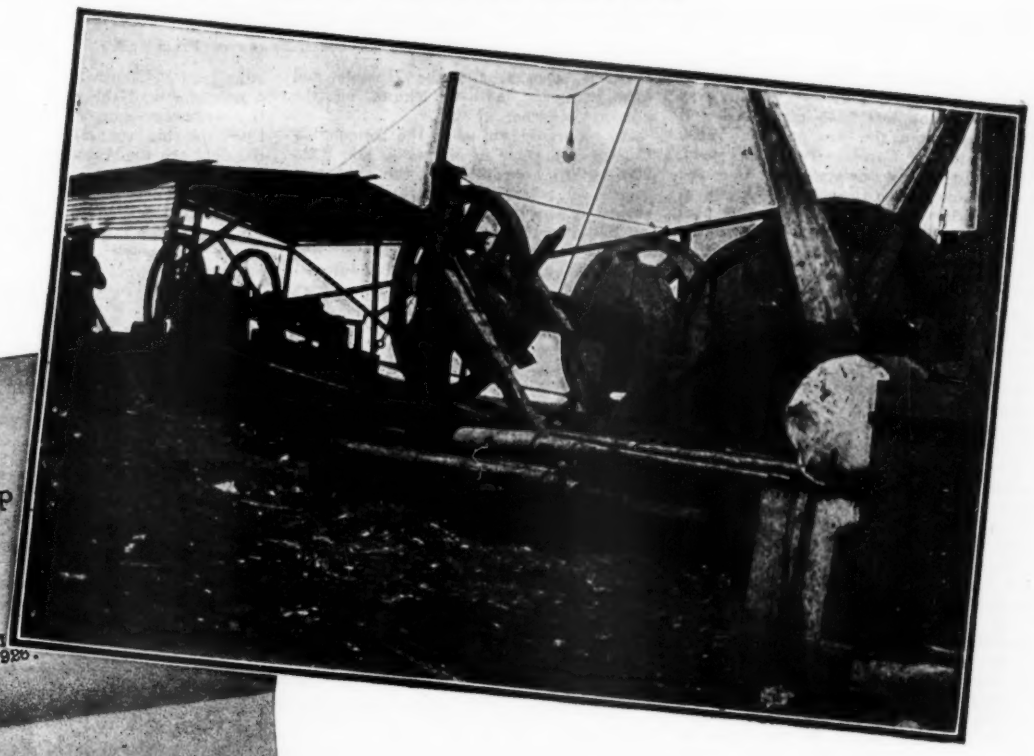
OIL WELL S

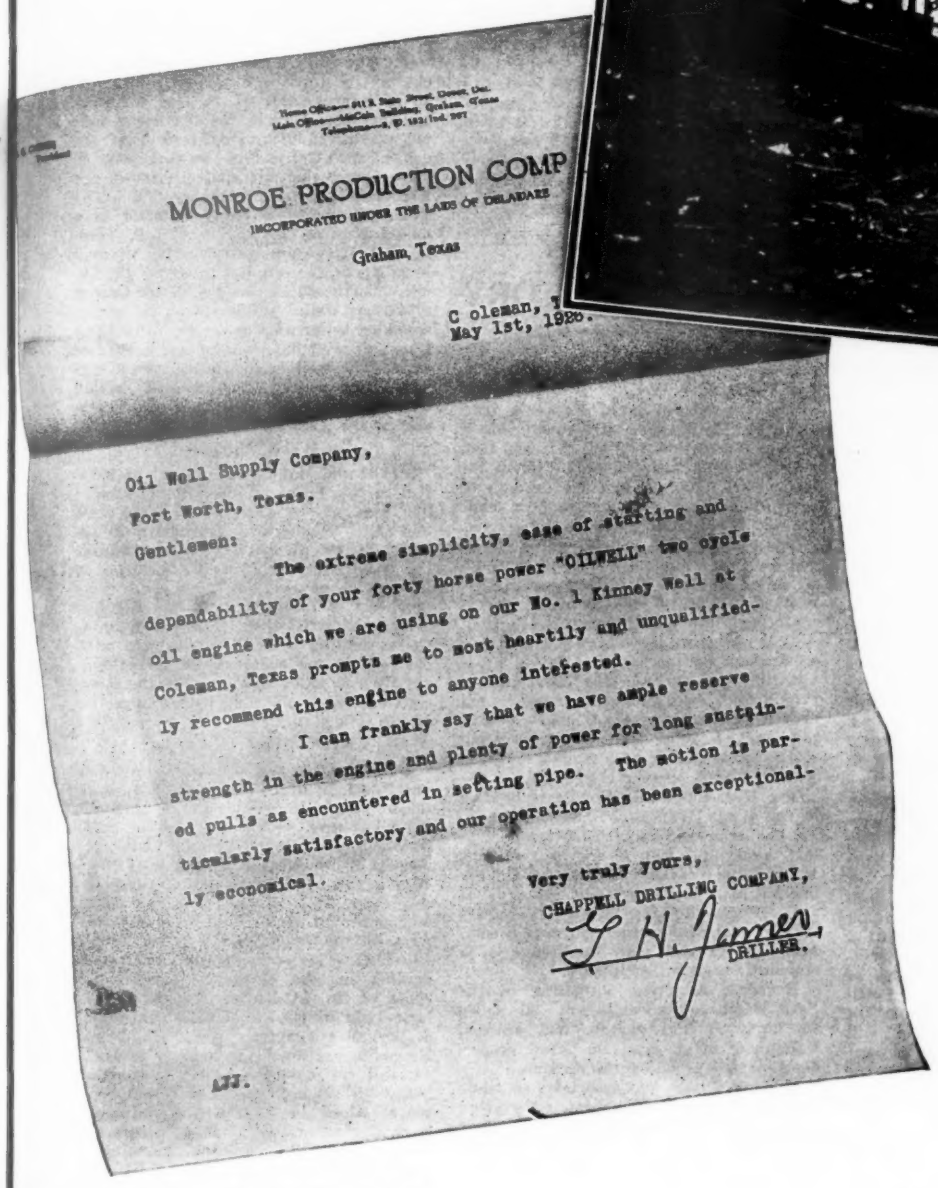
WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIEL EQU

XUM

"OILWELL"
TWO-CYCLE OIL ENGINES

To the right is shown a 40 H.P. "OILWELL" Two-Cycle Oil Engine used by the Chappell Drilling Co.





Home Office—911 S. Main Street, Denver, Col.
Main Office—McCain Building, Graham, Texas
Telephone—8, R. 183; Ind. 207

MONROE PRODUCTION COMP
INCORPORATED UNDER THE LAWS OF DELAWARE

Graham, Texas

C oleman, T
May 1st, 1926.

Oil Well Supply Company,
Fort Worth, Texas.
Gentlemen:

The extreme simplicity, ease of starting and dependability of your forty horse power "OILWELL" two cycle oil engine which we are using on our No. 1 Kinney Well at Coleman, Texas prompts me to most heartily and unqualifiedly recommend this engine to anyone interested.

I can frankly say that we have ample reserve strength in the engine and plenty of power for long sustained pulls as encountered in setting pipe. The motion is particularly satisfactory and our operation has been exceptionally economical.

Very truly yours,
CHAPPELL DRILLING COMPANY,
L. H. Jarmer
DRILLER.

JSH

AJJ.

"OILWELL" Two-Cycle Oil Engines are made in 30, 40 and 50 H. P. There is also the "OILWELL" Two-Cycle Gas Engine made in 30 and 40 H. P.

y of our 100 branches

SUPPLY CO.

. FIELD EQUIPMENT

BRANCH STORES IN ALL OIL FIELDS

"OILWELL" ESTD 1862 TRADE MARK REGISTERED

XUM

Start Tests in Webb County New Pool

The Texas Company and Magnolia Co. Rig Offsets to the Tide Water Associated Discovery in Carolina-Texas Field

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., July 19.—Attention of operators in southwest Texas the past week has been distracted and divided between the new pool in Webb County in the Carolina-Texas gas field, found by the Associated Oil Co. and Usher Carson with their No. 2 "A" Webster in Survey 684, and the new pool at Mexia discovered since the bringing in of the No. 2 "A" Webster by the Transcontinental Co. bringing in its No. 1 Rosson west of Mexia. A great many operators have gone to Mexia. The week so far as the new Carolina-Texas Field is concerned has been characteristic in the bidding for acreage and closing deals with the Gulf Production Co. late last week closing a deal with Weeks and Wilder, stockholders of the Carolina-Texas Oil & Gas Trust for Survey 685 consisting of 640 acres and for which it agreed to pay $125,000 cash and $250,000 from oil that may be produced and in addition one-eighth royalty on all flowing wells and one-sixteenth on all pumping wells completed on the tract. It is the last big tract in the territory that is reasonably close in. It is immediately south of 684 on which the Associated Oil Co.-Usher Carson well is located.

The one crying need in the new field is water with which to drill and there is a fear of a water shortage. Associated Oil Co. had one water well located and laying a 4-inch line. At the close of last week Associated was rigged up on two new tests in the field, one to the east and one to the west of the discovery well and The Texas Company was rigged up on an offset to the north and Magnolia Co. was rigging up a test that will offset The Texas Company on the west and the Associated's west offset on the north. This week promises to see these and several other tests started drilling.

Humble Co.'s pipeline to the field was delayed by the late arrival of five cars of pipe but the pipe was all on the ground and most of it laid late in the week and every indication that everything would be ready to connect up this week. The discovery well is still on a ¾-inch choke and will remain so until pipeline connections are ready and the choke will then be increased by stages until the size is reached on which the well does its best. The well has been hovering around 200 bbls. a day for the past week.

Acreage Purchases

The outstanding deal for acreage thus far was the purchase of the west half of Section 686, as reported last week, by the Magnolia Co. for $60,000 cash. It is east of and adjoining 685 purchased by the Gulf Production Co., as noted, at a much higher figure. The Texas Company bought 520 acres west of and adjoining the Gulf's purchase, consisting of the north half of Survey 690 and the north 80 acres of the southeast quarter of 690, the two tracts adjoining the Gulf's block, and also the southeast quarter of 683 which adjoins 690 on the north and is west of and adjoining 684.

Humble Oil & Refining Co. paid $750 an acre cash and $750 to be paid from oil for about 200 acres off the east end of Section 268 which is immediately north of 684 on which the Associated-Carson well is located. Section 268 is an irregular shaped tract but the bulk of the purchase lies northeast of the discovery well and only a little over a quarter of a mile from it. Houston Oil Co., which early in the year purchased the gas down to 3,000 feet from the Carolina-Texas Oil & Gas Trust on its leases, last week bought the oil lease on 1,000 acres in Section 268 and taking everything west of the Humble's purchase except about 100 acres between it and the Humble and also excepting a little chunk off the northwest corner of 268.

As reported soon after the Associated-Carson well came in Magnolia paid $22,000 for 15 acres in 684, the southeast corner of which touches the northwest corner of the 60 acres the well is on. At the time the well came in Associated had the lease on 260 acres in Survey 684 and owned the half and working interest in the 60 the well is on. The Texas Company owned the lease on 100 acres and the Gulf Co. owned 60 acres. This left 140 acres out of the 640 in the section that was scattered as to ownership in nine different blocks over the west half of the section.

Sun Oil Co. owns 60 acres out of the southwest corner of 680, less than a mile northeast of the well, and Sections 680 and 679, east and northeast of the well, have considerable acreage in small blocks. The Gulf Co. and The Texas Company own the south half of 336 less than a mile north of the well and Gulf owns the southeast quarter of 679. At this time the big companies represented in the field are the Associated Oil Co., Gulf Production Co., The Texas Company, Magnolia Petroleum Co., Houston Oil Co., Humble Oil & Refining Co. and Sun Oil Co. and with the Magnolia and The Texas Company having to drill offsets at once.

Carolina-Texas Field

E. L. Smith Oil Co. and C. O. Maddox spudded in last Friday in the northeast corner of the southwest quarter of the northwest quarter of Survey 333, located 150 feet from the north and east lines. It is 3½ miles southwest of the Associated-Carson well. Associated is rigging up on its No. 1 "A" Webster, in the northwest quarter of the southwest quarter of Survey 684, located 150 feet from the north and east lines and approximately 1,800 feet southwest of its discovery well. The derrick was up before Associated is rigging up on the west offset to the discovery well on the No. 4 Webster, and is rigging up on the No. 3 Webster, 1,100 feet from the north and 450 feet from the east lines of Survey 684, which brings it about a half mile west of the discovery well. Hazlitt-Simmons is drilling at 1,200 feet in No. 1 Barnsley, in the southwest quarter of Block 9 of Survey 268, and have a location for No. 2, in Block 16 of Survey 268. J. H. Winch is drilling at 1,900 feet in No. 2 de la Garza, in Block 12 of Survey 336, which brings it in the center of the east half of Survey 336, and a mile north of the Associated-Carson well. Houston Gulf Gas is moving in machinery for its No. 1 Barnsley, in Block 15 of Survey 268. U. S. Gas & Oil is waiting for water in the northwest corner of Survey 679. Daniels & Best are drilling at 1,600 feet in the northwest 10 acres out of the northeast quarter of the northwest quarter of Survey 684. The Texas Company is ready to spud in a north offset to the discovery well. Hadley & O'Byrne are getting ready to spud in at about the center of Section 49, 3½ miles northeast of the Associated-Carson discovery well. Witherspoon is understood to be arranging to drill the Clint Chenault well on down to the 2,600-foot sand. The well is in the southwest corner of Section 681, and is a little over 1½ miles northeast of the Associated-Carson well.

Webb Wildcats

Burns and Malone are drilling at 2,900 feet in No. 1 Coe, in Section 51, 4 miles due west of the Associated-Carson well, and O. W. Killam is shut down in his No. 1 Driver, in Survey 52, next adjoining it on the west. W. C. Ritchison, in Block 1 of Section 71, several miles northeast of the Carolina-Texas Field, is drilling at 2,253 feet. National Refining Co. is drilling below 600 feet in a wildcat test, in the northeast corner of Survey 700, 4 miles southeast of the Associated-Carson well, and in the direction of the Cole Gas Field.

Bruni Tract Extension

Ball-Kennedy and others are completing No. 4 Bruni, in the northeast quarter of Block 13 of the Bruni tracts in Webb County with casing set at 1,742 feet. Crown Central-Rydal Oil Corp.'s No. 12 Bruni, in the west half of Block 43, has topped the sand at 1,709 feet and set casing. No. 13, on the same block, is rigging up. No. 14, located 150 feet west of the center of the east line of Block 17, with sand at 1,707-26 feet, is drilling in. No. 15, the next location south of No. 14, has the derrick up and is moving in rig. Crown Central-Staley & Wynne are rigging up on No. 7 "A" Bruni, in the northeast quarter of Block 14, and are moving in a rig to complete No. 3 "B" Bruni, in the southeast quarter of Block 14. National Refining Co. is rigging up on No. 2 Bruni, in the east half of Block 43, the location being in the northeast corner of the block, and has made the location for No. 3 Bruni. Houston Gulf Gas is drilling at 1,000 feet in No. 2 Bruni in the northwest corner of the south half of Block 12.

Moody Oil Corp. completed No. 1 in the southwest corner of the north half of this block and got a salt water well which is the first well to fix the eastern limits of the extension of the field. The Houston Gulf Gas got a good well in its No. 1 in the southwest corner of the south half, just a quarter of a mile south of the Moody Oil Corp.'s salt water well and its No. 2, which offsets the salt water well will be an interesting test. Ball has some good wells in the northeast quarter

TWO GOOD PRODUCERS COMPLETED IN NEW MEXICO WILDCAT TERRITORY

By Special Correspondent

FARMINGTON, N. Mex., July 16.—Three new producing wells, two of which are located on hitherto unproven structures, is the record of development of outstanding importance in the San Juan Basin Field this week. The Hall well on the Red Mesa structure, Section 13-33-12, is reported to have reached the top of the Dakota sand with an excellent showing of oil and gas that threw the oil to the top of the derrick. It was immediately closed down and a control head installed until sufficient storage could be arranged to make a test. Only some 35 bbls. of storage was at hand as the three 50-bbl. tanks that had been brought to the well had been nearly filled by oil that had accumulated by seepage while awaiting the arrival of the 6-inch casing. The oil strike was made very shortly after drilling was resumed after the 6-inch casing had been run.

The news of the strike at Red Mesa had not ceased to be a topic of conversation when news arrived that the Ute Consolidated Oil Corp. drilling on the Mancos structure, 19 miles north of Shiprock, on unsurveyed lands, had topped the Dakota sand at a depth of 702 feet and had drilled into the sand and at a depth of 750 feet had struck water. Drilling was continued and at the depth of 780 feet a flow of oil was struck. Drilling was stopped at once and the work of straightreaming was started which will be carried down about 50 feet to shut out the water when a further test of the producing sands will be made.

In Wildcat Territory

These two strikes were made in wildcat territory, the Hall well being about 25 miles north of Farmington and the Ute Consolidated about 40 miles northwest. At about the same time the Continental-Santa Fe Co., drilling out the cement plug in No. 19 on the rattlesnake structure, Section 2-29-19, brought in another producer that is now estimated at 1,080 bbls. per day. This well is producing the same high grade oil that has been found in all the other wells on this structure and is 70 gravity and 85 per cent gasoline content. The oil in the Hall well is the heaviest yet found in this field and will test about 38 or 40 gravity. Oil from the Ute Consolidated has not yet been received in town but it is said to be very similar to that of Rattlesnake and Hogback.

The Continental-Santa Fe Co.'s operating on Rattlesnake structure, drilling on No. 17, Section 2-29-19, the deep test, had reached a depth of 3,060 feet at the last report. No. 18 has been completed as a producer and location has been made for No. 19 but drilling has not yet started.

The Continental Oil Co.'s No. 9 on Table Mesa structure, Section 3-27-17, 25 miles southwest of Farmington, has reached a depth of 450 feet.

Pipeline Shipments

The beginning of daily shipments of oil through the new pipeline to Gallup is awaiting the putting into effect of the rate agreed upon and which must be approved by the Interstate Commerce Commission. Regular shipments may not start before the first of August or even a little later.

The Ross-Bloomfield Snydicate drilling in the Bloomfield district, Section 11-29-11, had some bad luck the latter part of last week and lost a bit in the hole. It has been recovered and they are again drilling at a depth of 2,070 feet.

R. M. Smith-Miley interests are drilling on the Bishop tract in the Bloomfield district and plan to change to a standard rig at an early date.

Benedum & Trees, operating in the Seven Lakes district about 55 miles southeast of Farmington, had reached a depth of 300 feet at the latest report. C. S. Ringle is doing the drilling.

H. L. Williams and associates continue drilling on the Proclamation reservation lands despite the Presidential veto. They are located with a rig on Section 29-29-16 about 2 miles from the Midwest's Hogback wells.

The E. J. Miley interests have spudded in with a rig on the Hutchinson permit on the Red Mesa structure, Section 32-33-12, and are drilling.

The Congress Oil Co. drilling on the Garland permit in the Coots Canyon district, encountered another good flow of gas with some showings of oil and is drilling at something over 1,400 feet in a formation it considers favorable.

The Union Oil & Mining Co., operating in the Blanco district, about 20 miles east of Farmington, is drilling on its deep test but the depth was not given this week.

XUM

"Piercteel" Seamless Tubes for Oil Country Purposes

The development of seamless steel tubes in the oil country sizes which were formerly available only in welded pipe is proving a great boon to oil producers. The greatly increased tensile strength with consequent higher elastic limit and resistance to collapse of seamless casing, tubing and drill pipe has overcome many drilling and production problems.

Our "Piercteel" Seamless Tubes are made by piercing solid billets of basic open hearth steel. We control every step of manufacture from the ore in the mines to the finished product, and maintain a remarkably high and uniform standard of quality. We manufacture "Piercteel" Seamless Tubes exclusively, and our large, modern manufacturing facilities are unexcelled by any in the world.

Pipe Storage Yard at Memphis

In addition to the stocks of our tubes that we maintain at convenient points we have just put in a storage yard stock at Memphis, so we can better serve the Mid-Continent and Gulf Coast fields.

Our brand "Piercteel" is your assurance of highest quality seamless steel tubes made by piercing solid steel billets.

Pittsburgh Steel Products Co.

Pittsburgh, Pa.

New York **Chicago** **Detroit** **Houston** **Tulsa**

of Block 13, a quarter of a mile west of the salt water well.

Strube & Strube of Corsicana, who as previously reported completed No. 1 Puig in the southwest corner of Block 78, of the Edgington tracts, 150 feet from the south and west lines and got a salt water well are starting their No. 1 "A" Puig, 125 feet north of their salt water well. The salt water well is about 600 feet northeast of Ball's No. 1, on Block 13, which extended the Mirando Field a mile to the east and it is a quarter of a mile due north of the Moody Oil Corp.'s salt water well completed last week in the southwest corner of the north half of Block 12 of the Bruni tracts. Columbia Petroleum Corp. has gone to the northeast corner of Block 76 of the Puig tracts, north and west of the Strube & Strube well, nearly a half mile, to make a test of the north end of their block and the well is nearly down to the sand.

Other Operations

Staley & Wynne are drilling at 800 feet in No. 11 Bruni in the southwest 20 acres out of Block 13. Sun Oil Co. has spudded in No. 4 Bruni in the east half of Block 45, and has the derrick up for the No. 5 Bruni in Block 44, the location being 1,780 feet from the west line of the block and 150 feet south of the north line. Ruthada has the derrick up for No. 3 Bruni, on the east half of Block 18, located 450 feet from the west line and 150 feet from the north line. Columbia Petroleum Co. is completing No. 8 Puig in Block 77 of the Puig ranch, and has the derrick up for No. 9, located 337 feet east of No. 8. Gibson Oil Corp. is completing several tests on the north 60 acres of the west half of Block 13 of the Bruni tracts and will probably finish the drilling of all the outside locations, 15 in number, before the close of this week. No. 5, the second location down from the northeast corner, set casing at 1,723 feet. No. 6 set casing at 1,733 feet, one location south of No. 5. No. 8 set casing at 1,732 feet, the second location up from the southeast corner, and No. 10 was on the sand, the second location west of the southeast corner. No. 3 was close to the sand the second location up from the southwest corner and No. 14 had set casing at 1,725 feet, located 150 feet east of the center of the west line of the lease.

Simms Oil Co. has spudded in its No. 4 Bruni, in Survey 835, location being 1,100 feet from the east line and 500 feet from the south line. Associated Oil Co. has spudded in its No. 2 Bruni, in the south half of Block 44. Kirkpatrick & Lucas are drilling at 1,803 feet in No. 1 Puig. Killam is drilling at 500 feet in No. 2 Bruni, in Survey 835, a little north of Simms' No. 4 Bruni. Up north in the older part of the Mirando Field, in the Los Ojuelos grant, Crown Central Oil Co. is drilling at 1,700 feet in No. 10 Garcia, which is to be a deep test and will not stop at the regular producing horizon. Jackson and others are testing at 1,553-65 feet in No. 1 Garcia, in Survey 606. Kirkpatrick & Lucas are drilling at 600 feet in No. 1 Garcia, in Block 3 of Survey 606.

Cole Gas Field

In the Webb County end of the Cole Gas Field, Cole Petroleum Co. is rigging up with heavy machinery to drill deeper No. 23 Benavides in Block 9 of Section 8. Cole is fishing in No. 10 "A" in Block 5 of Survey 3, and drilling below 1,600 feet in No. 9 "A" in Block 7 of Section 753. Killiam is drilling at 200 feet in No. 2 Lopez in Block 10 of Section 319.

The feature of the week in the Cole Field on the Duval County side is an oil sand at 1,745-58 feet in Barkley-Meadows and Morgan's test in the south part of Survey 323. It is over a mile north of the Cin-Tex Petroleum Co.'s discovery well in the Cole Field, located on Block 16 of Section 10 of the Cole Subdivision of the Benavides ranch. Oil production in that district thus far has been confined to a pimple with four producers on the southwest half of the northwest half of Block 16, which constitutes the 20-acre lease of the Cin-Tex Petroleum Co. Houston Oil Co. got two wells on the 20 acres southeast of it and 150 feet from the Cin-Tex lease line and one well 650 feet farther southeast making seven wells all told. Wells drilled in other directions have been gas wells, though Col. A. E. Humphreys and Moody-Seagraves got two gas wells a mile north that had 65 feet of sand, the lower part saturated with oil. Barkley-Meadows and Morgan's well is less than one-quarter of a mile northeast of this. The drill went into the sand late last Thursday and the well is being cased and will be tested.

Due to the small size, the field had been somewhat of a disappointment though the production of the seven oil wells in it has been very satisfactory. Depth of the discovery well was 1,781 feet to the sand. One theory is that the discovery well is on a finger from the main pool which will be found to the northeast and in the direction of the Barkley-Meadows and Morgan well.

George M. Ball is drilling at 2,500 feet in his wildcat, 2 miles east of the field on the Roach ranch in Survey 463. Cole Petroleum Co. is coring in a deep test in Block 1 of Section 18 in No. 25 Benavides at around 2,000 feet. No. 26 Benavides, an offset well to Cin-Tex's No. 7, has plugged back and is testing at the same horizon as Cin-Tex's No. 7.

Piedras Pintas Salt Dome

Humble Oil & Refining Co.'s No. 5 Walsh, at Noleda, completed the fishing job and got the swab out of the hole but failed up to last accounts to make a well of the test. No. 5 is located 450 feet southeast of No. 4, which came in on December 20 last, a gusher making more than 1,000 bbls. a day on a choker from a depth of 3,623 feet. Production from the well has varied and during June it averaged only about 50 bbls. a day but recently has come back up to about 460 bbls. daily. Oil is high gravity. No. 6 Walsh, of the Humble, is drilling at approximately 3,332 feet. Magnolia is drilling at 3,740 feet in its No. 1 Speer, located 2,000 feet to the northwest. Humble's No. 9 Sanger is drilling at 500 feet on the Palangano Salt Dome, several miles to the northwest. Humble's No. 5 Schallert, in the same district, is drilling at 400 feet. Simms Oil Co.'s No. 1 Schallert tested at 3,595 feet on the Palangano Salt Dome and is being abandoned. It got salt water.

Duval Wildcats

O'Hern, Putnam & Seacord's No. 1 Benavides, 5 miles south of the Cole Gas Field, is drilling at 1,115 feet and in sand and pyrites in Block 12 of Survey 174. Simms Oil Co. is drilling at 700 feet in No. 2 Dinn, located 5 miles north of the Cole Gas Field, and a little east of a small gas well completed June 16. Murchison & Fain are drilling at 2,356 feet in No. 1 Peters in Survey 791. Maurer & Duggan, in Survey 123, are drilling at 3,635 feet. J. T. Graham reported last week to test No. 1 Beall in the northeast part of the county, is waiting for bailing line. Humble Oil & Refining Co.'s No. 1 Dowdy (fee) in the northern part of Duval County, is drilling at 2,195 feet. Moody Oil Corp.'s No. 1 Benavides, in Block 29 of Share 1 of the Mesquite ranch, tested salt water at 2,160 feet.

Jim Hogg County

In the Randado Field, Simms Oil Co. has completed Nos. 8 and 9 Palacious, each making approximately 150 bbls. a day on the pump. The are in the northwest quarter of Survey 291. Simms has spudded in No. 3 Weil, located 300 feet north of No. 1, which is in the southeast corner of Block 16 of Survey 81, and which resulted in a three-quarter-mile extension of the field. C. O. Maddox and E. L. Smith Oil Co. have spudded in No. 1 Palacious, offsetting the Simms Oil Co.'s No. 1 Weil on the south. Houston Gulf Gas Co.'s No. 10 Palacious, in Block 20 of Section 291, made a 75-bbl. well on the pump at 1,266 feet. Moody Oil Corp. is rigging up No. 1, on Section 287, Block 13, more than a mile east of production. The same company's No. 5 Palacious was temporarily abandoned and not deepened as first reported. No. 6, on Block 20 of Section 291, came in swabbing at the rate of 400 bbls. No. 7, on Block 22 of Survey 291, swabbed at the rate of 300 bbls. per day. No. 8, on Block 11 of Survey 291, came in swabbing at the rate of 350 bbls. daily. No. 9, on Block 20, is drilling. 'American Well & Prospect Co.'s No. 4 Palacious is on the pump and making 175 bbls. It is in the east end of Block 14 of Survey 291. The same company's No. 6 is being tested, and Nos. 7 and 8 are drilling on the same block.

Jim Hogg Wildcats

Simms Oil Co. is waiting for the return of 3-inch drill stem used in another well to resume drilling No. 1 Leyendecker on Survey 143, 5 miles south of the Randado Field. Test was made at 2,190 feet that was dry of everything. Four and one-half-inch casing was set to make the test and it will be deepened. The well has had some good showings especially of gas and the absence of water is in its favor. Blair & Stein have spudded in their test on the Schroeder tract in Survey 16, a few miles south of Simms' Leyendecker test. Hoad and others are drilling in Section 247. O'Byrne and others have spudded in on Block 14 of Section 230. L. M. Holden is drilling at about 1,950 feet in No. 2 Jones, east of Hebbronville.

Henne, Winch and Fariss Field

Kitselman & St. Albans' No. 3 Weber-Holbien, in Block 1 of Section 15, at 2,130 feet, made a 200-bbl. well. Their No. 4 Holbien, on a Texas Pacific Coal & Oil Co. lease on Block 15 of Section 15, is moving in a rig. No. 38 Holbien, Block 8, Section 16, was dry and abandoned at 2,191 feet without setting casing to test. No. 39 Holbien, Block 40, Section 11, is drilling at 800 feet. No. 40 Holbien, Block 30, Section 12, is dry and abandoned at 2,196 feet. No. 41 Holbien, on Block 41 of Section 11, is drilling at 1,400 feet. No. 42 Holbien, Block 9, Section 15, has erected a derrick. No. 43 Holbien, Block 9, Section 15, has made location. Associated Oil Co.'s No. 3 Lopez is drilling at 1,970 feet, in Block 20 of Share 1 of the Las Animas Grant. Magnolia Petroleum Co.'s No. 10 "B" Martinez, in Survey 276, completed at 2,026 feet, is a 65-bbl. well. Magnolia's No. 11 "B" Martinez is drilling at 1,600 feet and derrick has been erected for No. 12 "B" Martinez in Survey 276, located 700 feet west of the east line and 150 feet south of the north line.

Zapata County

Turney & Moore have made a location for No. 1 Bustamente in Zapata County on the line between the Charco de la India and the Comitas Grants. O. W. Killam is drilling at 1,561 feet and on a sand in No. 2 Hinnant in the old Mirando Valley Field. He is drilling at 1,547 feet in No. 3 Hinnant on the same section. Benedum & Trees have spudded in No. 1 Benavides in the Fansler & O'Hern Subdivision of the Casa Blanco Grant. Magnolia's No. 1 Cuellar, in Survey 278, is shut down waiting for water line. The Texas Company's No. 2 Jennings, at 4,685 feet, has cleared the hole and is plugging back to test at 4,183 feet.

Atascosa County

Plateau Oil Co.'s No. 1 Tomlin, west of Anchorage 2 miles, in northeast Atascosa County, is drilling at 2,250 feet. Witherspoon Oil Co.'s No. 1 Turpe, a little southwest of production in the Somerset Field, is drilling at 2,060 feet

(Continued on Page 127)

IRMA-WAINWRIGHT WELL LOOKS LIKE FAIR PRODUCER OF ASPHALTIC OIL

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ont., July 17. — In the Irma-Wainwright Field, east central Alberta, Emerald Oils' No. 1, LSD 8, Section 30-45-6w4, which got the sand around 2,100 feet, is cementing the casing and will likely be drilled in next week. The test got the oil sand some weeks ago, and has since been waiting for delivery of cement. The well looks like a fair producer of asphaltic crude similar to that in Edmonton-Wainwright's No. 1. Fabyan Petroleums, LSD 8, Section 24-45-8w4, has finished a water well and is ready to spud in the test for oil. Albion Drilling & Producing Co., Ltd., of Edmonton has located a test in Section 31-45-6w4, close to British Petroleums' No. 5. The company is incorporated under Dominion charter with head office at Edmonton, the officers being: President, Robert L. Shaw; vice president, Charles E. Campbell; secretary-treasurer, J. Boyd McBride; director, J. O. Long.

On the Ribstone-Blackfoot structure, east of the Irma-Wainwright Field, Imperial Oil, Ltd., is unloading rig and casing for Imperial-Ribstone's No. 1, Section 5-45-1w4. Ribstone-Wainwright Oils, Ltd., recently organized under Dominion charter with $1,000,000 capitalization, is planning to drill a test near Ribstone Station. Officers of the company are: President, E. D. Benson, Calgary; vice president, H. H. Croxton, Calgary; secretary, W. A. Rae, Edmonton; directors, Joseph Howson, J. K. Brennan, D. J. Moore. Ribstone Oils, Ltd, LSD 1, Section 1-46-1w4, is working on derrick. A standard outfit will be used.

Turner Valley Field

In the Turner Valley Field, Royalite Oil Co.'s No. 5, LSD 13, Section 7-20-2w5, is at 3,337 feet and drilling. Around 3,300 feet a small pocket of gas was struck. The flow was unofficially reported at 8,000,000 feet of wet gas, but the report very much exaggerates the production, the flow being similar to those encountered in other deep tests just above the Madison limestone. Royalite's No. 6, LSD 16, Section 31-19-2w5, which has been held up by casing troubles, has resumed drilling at 2,872 feet.

Imperial Oil, Ltd.'s tests elsewhere in Alberta are making steady progress. In the Jumping Pound foothills, 25 miles west of Calgary, Imperial-Bow River's No. 1, LSD 15, Section 12-25-5w5, is at 2,884 feet and drilling. In the Highwood district, Imperial-Highwood's No. 1, LSD 3, Section 36-18-3w5, is rigging up. In the Rice Creek Field west of Nanton, Imperial-Rice Creek, Section 4-14-2w5, is at 4,484 feet and drilling.

In the Border Field, east of Coutts, Imperial-Erickson Coulee, LSD 13, Section 8-1-12w4, has been drilled through the cement at the bottom of the 10-inch casing at the 2,376-foot level. In the Foremost Field, material for the rig at the Imperial-Burdett's No. 1 deep test is being hauled to the site, and the men will shortly commence work on the derrick.

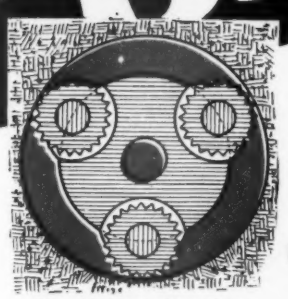
Drilling Operations

In the Turner Valley Field, Illinois-Alberta's No. 1, LSD 14, Section 12-20-3w5, is drilling through the cement at the bottom of the casing at 3,662 feet. Vulcan Oils' No. 1, LSD 11, Section 13-20-3w5, is making some progress with a fishing job at 4,890 feet. A string of tools and some cable were lost in the hole. McLeod Oil Co.'s No. 2, LSD 16, Section 1-20-3w5, is at 3,727 feet and drilling, in a very hard formation. Recent dolomite tests show only 18.83 per cent of dolomitization, compared with 35.63 per cent in the top of the limestone. It is expected that around 150 more feet of drilling will be required to reach the Royalite sand. Great West Oils' No. 1, southeast quarter of Section 7-20-2w5, is at 2,475 feet and drilling, carrying open hole for the 10-inch casing. The 15½-inch casing is cemented in at 1,110 feet, being the longest string in the field. Great West's No. 2 is rigging up on the same section.

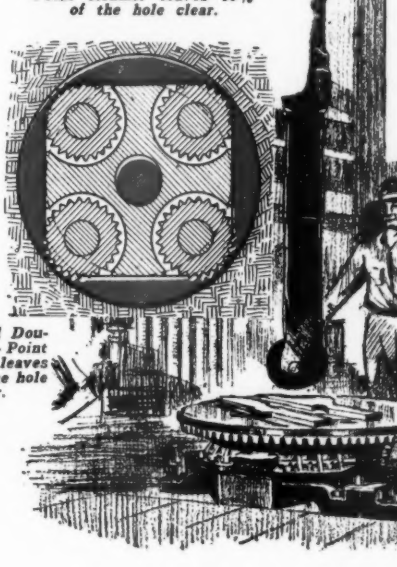
Dalhousie Oil Co.'s No. 1, LSD 4, Sec-

(Continued on Page 125)

Better Disc Bit Drilling



The Reed Double Three-Point Reamer leaves 35% of the hole clear.



The Reed Double Four-Point Reamer leaves 28% of the hole clear.

With Reed Double Three and Double Four-Point Reamers

Efficient operation of your disc bit depends largely upon maintaining proper direction—in order to insure straight hole; and in keeping the hole full gauge, even after the bit suffers considerable wear.

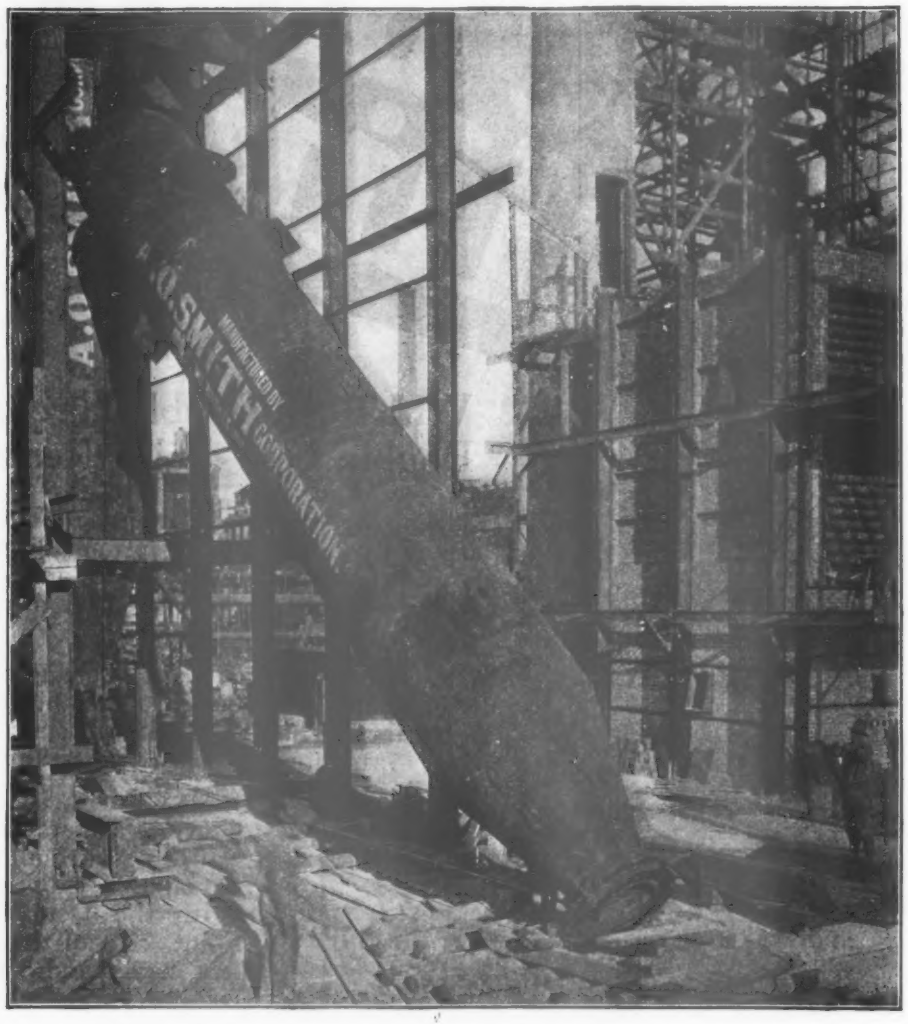
A Reed Double Three or Double Four-Point Reamer, following behind a disc bit, forms a rigid member having ample contact with the walls of the hole to insure proper direction—even in soft formations.

These reamers are designed so as to allow free passageway for slush. With the Double Four-Point, 28% of the hole is left clear; and with the Double Three-Point, 35% is left clear.

When you use Reed Reamers, you have no trouble with crooked hole or tight casing. Many operators now use them directly behind their fishtails.

Reed Roller Bit Co.

HOUSTON LOS ANGELES



CONSTRUCTION VIEW at the Port Arthur works of The Texas Company, showing No. 2 Still of a Holmes-Manley unit being hoisted into position. This vessel is built by an improved arc welding process, with metal of 2½ inches in thickness. , , , , , ,

The Holmes-Manley *Cracking* Process

Long past the experimental stage, this process is being constantly improved by THE TEXAS COMPANY and its Licensees. All Licensees receive the benefits of such improvements.

The Licensee receives:—

1. *A Proven Process*
2. *Complete Technical Service*
3. *The Benefit of Future Developments*

Licenses Granted by

THE TEXAS COMPANY, U. S. A.

Apply to

R. C. HOLMES, *President*

17 Battery Place, New York, N. Y.

Hocking County, O., Has 325 Bbl. Well

Short Distance From Production. Coshocton County Gets 172-Bbl. Producer. West Virginia Wildcats

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., July 19.—A very good producer in the deep sand territory in southeastern Ohio and several fair producers in West Virginia tells the story of the week. Southeastern Ohio had fewer than the usual number of completions.

The best completion of the week is the Fellowship Oil & Gas Co.'s test on the T. J. Mowery farm, located in the deep sand territory in southeastern Ohio. It is located in the southeast quarter of Section 24, Green Township, Hocking County. The first 24 hours after completed and shot in the Clinton sand it produced 325 bbls., giving it the distinction of being one of the largest wells completed in the deep sand territory during the year. However, it is located only a short distance from previous production. The reduction in the market will likely cause a slowing up of operations in the deep territory, where the cost to drill is excessive.

The southwest Pennsylvania fields had but one completion, a gasser, in Richhill Township, Greene County.

Late Completions

Henry district in Clay County, West Virginia continues to lead in the number of wells completed. In this district, the Ohio Fuel Oil Co. has completed in the Big Injun sand No. 11 on the J. B. Casto 220 acres. It is not good for more than 15 bbls. a day. In the same district the Virginia Gasoline & Oil Co. has completed in the same formation No. 8 on the Brown, Swan, Goshorn and Sinnett lease good for 25 bbls. a day. This location is 400 feet north of the South Penn Oil Co.'s No. 4 on the Joseph Belcher farm.

The Ohio Fuel Oil Co. has completed in the Big Injun sand No. 10 on the J. B. Casto 220 acres, estimated good for 40 bbls. a day. In the same district, the South Penn Oil Co. has completed No. 23 on the O. D. Stockly farm. It is a natural producer good for 25 bbls. a day. The location is 1,500 feet north of No. 15 on the same farm.

Ritchie County

In Grant district, Ritchie County, R. C. Jackson & Co. have completed a second test on the Loomas heirs' farm. It is a gasser in the Big Injun sand. In McKim district, Pleasants County, Riggs & Newell have a very light pumper in the Keener sand at No. 16 on the George Varner farm. In the same district, George Stout and others have the same kind of a pumper in the Cow Run sand at a test on the G. D. Stout farm.

In Courthouse district, Lewis County, the Hope Natural Gas Co.'s test on the R. V. Malloy farm is dry in the Squaw sand. It has been abandoned. In Central district, Doddridge County, Nay & Kintzer's second test on the Radabough-Fucey farm is a gasser in the Big Injun sand.

Lincoln County is completing a good many gas wells. In Carroll district, Maebron & Huffman have a gasser in the Berea grit at a test on the Charles Gillenwater farm. In the same district, L. R. Sweetland has completed No. 7 on his own farm, a gasser in the same formation.

In Geary district, Roane County, the United Fuel Gas Co.'s test on the H. D. Garrett farm is a gasser in the Big Injun sand. In the same district, the same company's tests on the Mary F. Taylor and L. D. Osborne farms are gassers in the same formation. In Clay district, Wetzel County, the Johns Gas Co. has a 5-bbl. pumper in the Gordon sand at a test on the B. W. Peterson farm. In Center district, the Hope Construction & Refining Co.'s test on the Alonzo Jackson farm is a very light pumper in the same formation.

In Union district, Marshall County, the Hicks Oil & Gas Co. has a gasser in the salt sand at a test on the Alfred Howard heirs' farm. In Big Sandy district, Kanawha County, the United Fuel Gas Co.'s test on the Lewis Woods farm is a duster. In Cabin Creek district, the Ohio Fuel Oil Co. drilled its test on the Prichard-Robson tract to a depth of 4,000 feet and shut down, having developed no oil or gas.

Wood County

In the Plum Run Pool, Williams district, Wood County, D. E. McClure has completed a second test on the Rosie Northerp farm, dry in the first Cow Run sand. In the same district and locality, Smith & Goldish have a duster in the salt sand at No. 3 on the Smith-Goldish farm.

In Center district, Wetzel County, the Hope Construction & Refining Co. has a duster in the Gordon sand at a test on the F. E. Miller farm. In New Milton district, Doddridge County, the Carnegie Natural Gas Co.'s test on the A. O. Sutton farm is a gasser in the Big Injun sand.

In Crook district, Boone County, the Owens Bottle & Machine Co. has completed No. 11 on the T. W. Bedford farm. It is a gasser in the Big Injun sand. In Sherman district, Godfrey L. Cabot has drilled his No. 16 on the Sherman farm to a depth of 3,310 feet. Neither oil nor gas was encountered.

In Otter district, Clay County, Boggs & Hall have a duster in the salt sand at a test on the N. F. Jarvis farm. In Louden district, Kanawha County, Fundenberger & Co. have a duster in the Berea grit at a test on the Lude P. Herman farm.

In Jefferson district, Nicholas County, the Hamilton Oil & Gas Co.'s No. 6 on the Craig heirs' farm is a gasser in the Big Injun sand. In Scott district, Putnam County, Judge Holt, Brice & McComas have a gasser in the salt sand at a test on the William Lee farm. In Sherman district, Boone County, Halstead & Co. are drilling a test on the Hopkins-White farm.

Harrison County

In Clark district, Harrison County, Rapp & Nutter have made a location on the G. C. Nutter farm. In Ten Mile district, Burke & Lyons have started to drill on the W. T. Williams farm. In Elk district, the Vesper Oil Co. is due in the Big Injun sand on the Alva Shepler farm. In Ten Mile district, the Clarksburg Light & Heat Co. is due in the same formation at a test on the A. M. Morrison farm.

In New Milton district, Doddridge County, Trainer & Travis are rigging up on the G. A. Rose farm. The same parties are due in the Gordon sand on the C. Ford farm. In McClelland district, G. L. Cabot has the road completed to a location on the D. G. Hutson farm. In Grant district, S. D. Gribble has a rig up on the Alvander Stuttler farm.

In Union district, Harrison County, on Sycamore Creek, 7 miles south of Clarksburg, the Reserve Gas Co. has drilled a test on the J. D. Reynolds farm through the Speechley. It is a gasser. In the same district, on West Fork River, 6 miles southwest of Clarksburg, the Hope Construction & Refining Co. is drilling a test on the G. W. Morrison farm. On Ten Mile Creek, Ten Mile district, the Conservative Oil Co. has the rig completed for a test on the A. A. Williams farm.

Kanawha County

On Elk River, Big Sandy district, Kanawha County, the United Fuel Gas Co. has completed a test on the S. P. Young farm. It is a gasser in the Big Injun sand good for 380,000 feet. In Union district, Wood County, the White Sand Oil Co. has completed in the Berea grit No. 3 on the John Rost farm good for 5 bbls. a day in the Berea grit. In Williams district, in the Henderson Pool, the Henderson Oil Co. has completed in the first Cow Run sand No. 11 on the Drain heirs' farm, not good for more than 2 bbls. a day.

Drilling and Starting Tests

In Grant district, Cabell County, the Harshbarger Oil & Gas Co. is rigging up on the Clyde & Eugene Harshbarger farm. In Henry district, Clay County, D. H. Stephenson is drilling on the Bethel M. E. Church lot. In Union district, Kanawha County, the Bird Oil & Gas Co. has a rig up on the G. S. King farm. In Big Sandy district, Kanawha County, the United Fuel Gas Co. is building a rig on the H. A. Cobb farm and rigging up on the G. H. Osborne farm. In the same district, the same company has made three locations on the Littlepage-Gardner farm. In Big Sandy district, the Hays Oil & Gas Co. has started to drill on the M. Young farm. In the same district, the Queen Shoal Oil & Gas Co. has started to drill on the D. B. Snider farm. In Cabin Creek district, the Lane Oil & Gas Co. is rigging up on the John Hancock farm. In Malden district, the Ten Mile Oil & Gas Co. is drilling on the Henry Dickson farm. In Poca district, the Poca Fork Oil & Gas Co. is drilling on the John A. Dodd farm.

On Cedar Run, DeKalb district, Gilmer County, Snyder & Deems have started to drill a test on the J. A. Cain farm. This location is 2 miles northwest of the Philadelphia Oil Co.'s production on the D. Stalnaker farm on Grass Run. On Indian Creek, McElroy district, Tyler County, the American Oil Development Co. has a rig up on the Stephens Pitt farm.

In Murphy district, Ritchie County, J. F. Deems & Co. have started to drill on the W. H. Pierpoint farm. In DeKalb district Gilmer County, A. E. Ellis is rigging up on the Will J. Fling farm. This is the second test for this farm. In Sheridan district, Calhoun County, Martin Crawley has started to drill on the Bert Haverty farm.

Roane County

In Geary district, Roane County, the United Fuel Gas Co. is rigging up on the J. E. Tawney farm. In the same district, the Morley Oil & Gas Co. has started to drill on the Sulphur Springs school lot. In Scott district, Boone County, the Owens Bottle & Machine Co. is building a rig on the H. H. Easter farm.

Wildcat Operations

In several of the southwest West Virginia counties there is work of a wildcat nature under way and starting. These wells are located some a great distance from any previous production. If a new pool is to be found in West Virginia it will likely to be in some one or more of these counties.

In Kermit district, Mingo County, Gainer, Pfarr & Co. are drilling on the Andrew Newman farm. In Jefferson district, Nicholas County, Godfrey L. Cabot is drilling on the Bentree Coal & Oil Co.'s

(Continued on Page 90)

DRY HOLE IN SAGINAW FIELD ONLY FAILURE OUT OF ELEVEN

By Whit

SAGINAW, Mich., July 17.—The new Saginaw Field, as reported late last week, has got its first real setback in the dry hole drilled by the Bliss Petroleum Co., on the west line of the Carl Boldebuck 160 acres, in the southeast quarter of Section 2, Saginaw Township, and located approximately 2 miles almost directly north of the discovery well and a little over a mile north of the nearest producing well, which is the Sun Oil Co.'s No. 1 on the Adam Nuerminger farm, Section 11, which is the farthest north producing well, and only a few hundred feet north of the Sun Oil Co.'s initial well on the Nuerminger farm. How far the field will extend to the north of the Nuerminger well remains to be seen. There is quite a dip in the Berea sand to the north, as the Boldebuck well struck the top of the Berea sand at 1,883 feet and had only a very light showing at 13 feet in the sand, but was later drilled to close around 40 feet in, where a heavy dose of salt water was encountered and the casing was pulled and the hole abandoned. The Nuerminger well of the Sun Oil Co. struck the top of the Berea at 1,828 feet, or 55 feet higher than the Boldebuck test.

The dry hole was the eleventh well to be completed in the new Saginaw Field and the first failure to be recorded, which is an excellent record for any new prospective field, although eventually more of the same kind will be encountered before the field is completely defined. It is the second completion for the Bliss Petroleum Co., the other being the producer on the Casper Ulrich farm, one of the early completions in the field.

The Saginaw Prospecting Co., as also reported late last week, added another to its list of producers, making a total of eight in the field for this company out of the dozen wells completed, one being a dry hole and 11 were producers. The eighth well, or No. 2 for the Prospecting Co., is on the land owned by the city of Saginaw, on which the discovery well was found, and only 700 feet north of No. 1 and just south of the Pere Marquette Railroad, and known as the Deindorfer Woods. The well struck the top of the Berea at 1,811 feet and was drilled 10 feet in. This is the shallowest hole yet drilled to the Berea sand in the field, being just 1 foot higher than the same company's No. 4 well. Its showing is similar to the other wells in the field, but may make a better showing when put on the pump after shot.

The Saginaw Prospecting Co. is now going along with its drilling on the Hanson farm, on Heremansau Road; No. 1 on the John Brimer farm; No. 1 on the August Kruske farm, Section 11, on the Heremansau Road, and No. 1 on the Waterworks Park subdivision, the last being the twelfth well when completed for this company which is running four strings of tools.

Encountering unexpected difficulties in the form of a vein of soft mud that persisted in running into the drill hole, the test of Charles Murrin on the Henry Owens farm, west of the Tittabawassee River and half a mile north of State

(Continued on Page 90)

TNEMEC PAINT

A Test You Can Make Yourself

A quick test for determining the relative durability and rust-resisting qualities of various paints when used on steel, can be made in your own office. Take a small panel of rusty iron; brush off the rust; apply a coat of No. 5 Black or No. 6 Red Tnemec to one side, and a coat of any other paint you wish to the other side. Allow panel to dry thoroughly. Then allow it to stand in a tumbler of concentrated brine for 24 hours, and follow this with exposure to air and sunlight for 24 hours. Continue this process alternately and see for yourself how long each kind of paint protects the iron.

"If CONTINENTAL Sells It, There Is No Better"

THE CONTINENTAL SUPPLY COMPANY
General Offices: St. Louis
Export Office: 2 Rector St., New York
London Office: 316-317 Dashwood House, Old Broad St., London E. C. 2, England

CONTINENTAL

Tiffin Field Best in Lima District

Seneca County Well Makes 30 Bbls. Berne Field, Adams County, Indiana, Active. Clark County, Illinois, 70-Bbl.

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio, July 16.—The best well for the week in the old Lima Field of northwestern Ohio, and one that extends the producing territory of the Tiffin Field, in Seneca County, some little distance, is a test on the D. Hunker farm, Section 31, Liberty Township, with a flush of 30 bbls. from the Trenton at 1,457 feet.

In old defined territory, a 35-bbl. well was struck on the Deeds farm, Section 6, Eagle Township, Hancock County, and southwest of Findlay.

Indiana did not make a very good showing, as the best completion reported was a 24-bbl. pumper on the Smithley farm, Jefferson Township, Jay County, while a light gas well was found on the Schulte, in Blue Creek Township, same county. Illinois had few new wells, the best of which was 70 bbls. in the McFarland heirs' farm, Martinsville Township, Clark County.

Lima Field

Less completed work is reported from the old Lima Field of northwestern Ohio, than has been the case for a number of weeks, due to a water shortage and the holiday period. Weather conditions are not the best owing to sudden changes.

Leasing is still going on adjacent to production on all sides of the old defined line of the Trenton Rock Field, and many tests are planned on paper and if they were all drilled more would be known about the extent of the field which covers so many miles with no showing of breaks to any extent. There is also much undrilled acreage within the defined limits to say nothing of the taking of leases on farms that were drilled partly over as far back as 1887 and abandoned after a few years. Usually in this case the new-crop wells are drilled deeper into the producing rock known as the Trenton and open up something new in the way of deeper pays, although it is a known fact that the deep pays do not furnish steady production like the upper pays of the same formation, but dwindle down to small strippers within a short time. With the millions of barrels of crude taken from the upper pays of the Trenton, it is a wonder that any oil could be found after these many years.

South of Perrysburg, in Perrysburg Township, Wood County, William G. Grolle's No. 4, in the southeast corner of the H. Grolle farm, in the southeast quarter of Section 33, known on the oil map as the W. Brinker farm, is producing 7 bbls. with top of sand tapped at 1,233 feet and oil at 18 feet in the sand.

In Eagle Township, Hancock County, Harpst Brothers' No. 23, 660 feet from the north line and 200 feet from the east line of the M. H. Deeds farm, Section 6, pumped 35 bbls. Sand was 1,315 feet and total depth of hole was 1,390 feet. This is an exceptionally good well for the old defined limits.

The Ohio Oil Co.'s No. 9, in the northeast corner of the John H. Meyer farm, in the northwest quarter of Section 30, struck top of sand at 1,262 feet and drilled 110 feet in the sand to a total depth of 1,372 feet, for an initial production of 25 bbls.

In Union Township, Auglaize County, Campbell and others in the northwest corner of the Ira Price farm, in the southwest quarter of Section 32, developed into a duster. Top of sand at 1,400 feet and drilled 115 feet in the sand.

In Liberty Township, Seneca County, Murphy Sons' test in the southwest corner of the D. Hunker farm, mapped as the D. A. Tucker, Section 21, struck sand at 1,358 feet and drilled 99 feet in to a total depth of 1,457 feet, with a flush of 30 bbls. This well makes an extension to the old producing areas, but that section of the Lima Field is known as spotted territory and no one can even guess the result of the drill until a well is completed.

It was thought that development work would be rushed in the Roundhead Pool, in McDonel Township, Hardin County, with the completion of a pipeline from that point to Adgate Station of the Buckeye Pipe Line Co., south of Lima, but there is no showing that work is increasing. The field has a good outlet for its crude and it is up to the operators to increase their production. The field is one of the best in the old Trenton Rock area at this time and the wells prove staying production. With a small well at Belle Center in the southern part of the county there must be some connection between the well and the developed field.

Central Ohio

The completion of 18 wells, 6 of which were oil wells, with a flush of 40 bbls., 4 dry holes and 8 gas wells in the Central Ohio Field during the past few days, brings that field up among the leaders in the Central West area. At the same time seven new locations for wells have been made and drilling started on 16 new holes. From now until cold weather comes there will be more active development work and many advance tests will be brought in to widen out the already large area of producing oil and gas territories.

In Jefferson Township, Knox County, the East Ohio Oil Co. drilled in a nice gas well in the northeast corner of the A. Arwiller farm, Section 7. In Brown Township, the Upham Gas Co. started drilling a test on the J. J. and S. M. Hair 29 acres, Section 4. In Morgan Township, Widerman and others are drilling a test in the northeast corner of the Jacob Hays 120 acres, Lot 20, while in Clay Township, same county, Roy Decker is drilling a wildcat in the northeast corner of the L. M. Divan 33 acres, Lot 19.

In Ashland County, Green Township, a good gas well was drilled in by the Logan Gas Co. in No. 5, in the southwest corner of the P. C. Cowan 350 acres, Section 21. Same company made a location for a test in the northeast corner of the John Moore 160 acres, Section 19, Lake Township. The Ohio Fuel Gas Co. made a location for a test in the southwest corner of the S. C. Baldorf 80 acres, Lot 84, Sullivan Township, and the Klise-Eckstein-McCann Co. is drilling No. 3 in the southeast corner of the J. A. Spencer 34 acres, Lot 3.

In Medina County, Chatham Township, H. A. Dempsey's No. 29, on the D. Ross farm, Town 13, Lot 7, for a 5-bbl. producer, while the Star Oil Co.'s No. 3, on the Isaac Kent farm, is estimated at 10 bbls. Two good gassers were completed in Liverpool Township, in the Ohio Fuel Co.'s No. 1 in the northwest corner of the Albert Trefany 38 acres, Section 3, and the Logan Gas Co.'s test in the northeast corner of the Nick A. Granson 82 acres, same section. No. 2 location has been made on the Granson lease and in the southwest corner of the farm. In Spencer Township, the Logan Gas Co. is drilling a test on the Ellsworth Breley 78 acres, Section 4.

In Columbia Township, Lorain County, the Empire Gas & Fuel Co. is drilling a test in the northwest corner of the M. and B. Francis 110 acres, Lot 30.

In Wayne County, Milton Township, the East Ohio Gas Co.'s second test 400 feet from the north line and 1,450 feet from the east line of the C. W. Frick 80 acres, Section 21, is a fairly good gasser. In Congress Township, Glenn Harmon and others are drilling No. 3, in the southwest corner of the Clayton Good 44 acres, Section 36. Warren Palmer and others are starting No. 4 on the S. A. Swanson 86 acres, mapped as the Kaslin farm, same section. Empire Gas & Fuel Co. made a location for a second test in the southeast corner of the Ora Kenney farm, of 74 acres, Section 36, and the Ohio Fuel Gas Co. made a location for a test in the northwest corner of the Lowery Johnson farm, Section 33.

In Holmes County, Kilbuck Township, the East Ohio Gas Co.'s No. 4, on the George Moritz farm, Lot 10, is showing for 3 bbls. In Monroe Township, the Ohio Fuel Gas Co. is drilling a test in the southeast corner of the John Shanklin 2 acres, Lot 7. In Hardy Township, the East Ohio Gas Co. is drilling No. 1 on the Benice Allison 82 acres, Lot 38, and No. 2 in the northeast corner of the John Hastings 100 acres, Lot 25, while the Klise-Eckstein-McCann Co. is drilling No. 1 in the southeast corner of the Caroline Cullen 80 acres, Lot 20. The same company is drilling a test in the northeast corner of the Laura E. Turner 75 acres, Lot 18, Kilbuck Township.

In Athens County, Carthage Township, the Logan Gas Co. has a big Injun sand duster at a test 1,020 feet from the north line and 400 feet from the west line of the Eaton Chase 140 acres, Lot 3. Same company is drilling No. 2 in the northeast corner of the J. W. Barnhill 150 acres, Lot 75, and No. 1, 150 feet from the north line and 725 feet from the east and west lines of the Caroline Noyce and others' 101 acres, Lot 2. This company also made a location for No. 3 on the W. O. and Mary Stout 54 acres, also in Lot 2. Hawkins and others have an average gas well at a test on the John Zumbaugh 200 acres, Lot 36. This firm is drilling a test on the Oliver Davis 2 acres, off the northwest corner of the A. J. Runyon farm, same lot. The Logan Gas Co. is drilling a test in the southwest corner of the P. C. Shaulis 82 acres, Section 7, Waterloo Township, same county.

In Coshocton County, Newcastle Township, the Logan Gas Co. has a very light gas well in a test in the northwest corner of the William Johnson 38 acres, Section 13, and Cassingham & Bell Brothers are drilling No. 13 on the Cassingham farm, Section 5. In Perry Township, the Klise-Eckstein-McCann Co. has a dry hole in a test in the northeast corner of the Marion G. Wright 200 acres, Section 21.

In Adams Township, Guernsey County, the Logan Gas Co. got a nice gasser at

(Continued on Page 92)

OWENSBORO FIELD IS GETTING MOST ATTENTION IN KENTUCKY

By Whit
Staff Correspondent, Kentucky-Tennessee

LEXINGTON, Ky., July 19.—Development work has almost been at a standstill in the southern fields of Kentucky and Tennessee, which is usually the case in the fore part of July, as a majority of the field workers as well as operators go to their homes and remain for some time and work lags until they return. Very little was accomplished for the week, there being but 16 completed wells reported from all divisions of Kentucky and none from Tennessee.

The small hamlet of Dunville, in Casey County, has been stirred by the shooting of an important test well drilling by Irwin and Anschutz on the Ben Russell farm, on Goose Creek, 2 miles to the south of Dunville. Jim Irwin, the contractor and operator who made the location and drilled the test into the Trenton Rock at a total depth of 592 feet, had a 100-quart shot of nitroglycerin that not only blew oil and tamping high in the air, but a string of casing as well. The casing has been reset and the hole is being cleaned out preparatory to putting it on the pump. Through all this rock in the well it is showing about a barrel an hour, according to Mr. Irwin, but may be much improved when put on the pump. The oil is of 42 gravity and looks as though a new pool had been discovered, but more can be told of the well's value when it gets to putting the crude through tubing into storage. Large crowds were present to see the shooting of the well.

Another important test was that made by the Rex-Pyramid Oil Co. on the R. A. Carpenter farm, at Limestone, Carter County, Kentucky. This well, while not large, being reported at 5 bbls. from the Weir sand at a depth of 446 feet, means much for that area, and will bring about quite a drilling campaign, for the sand is well known as one that holds up its production.

The best completion for the week was No. 6 on the Laura Mercer farm, in the Owensboro district, with 35 bbls., or better. This is a little in advance of the Swope Pool that was opened in 1924. Early in 1925 the Pennsylvania-Indiana Oil Syndicate brought in a test on the Colonel Powers lease, which showed for 150 bbls., opening up quite a wide extension to the Swope Pool. And the largest completion in the Owensboro Field up to the completion of the Guenther-Gant well drilled by the Chicago Petroleum Syndicate, since which the pool has been farther extended by good wells on the Ellis and other outlying farms. To this pool is credited much the rapid increase in the daily production of the Owensboro Field.

Week's Work

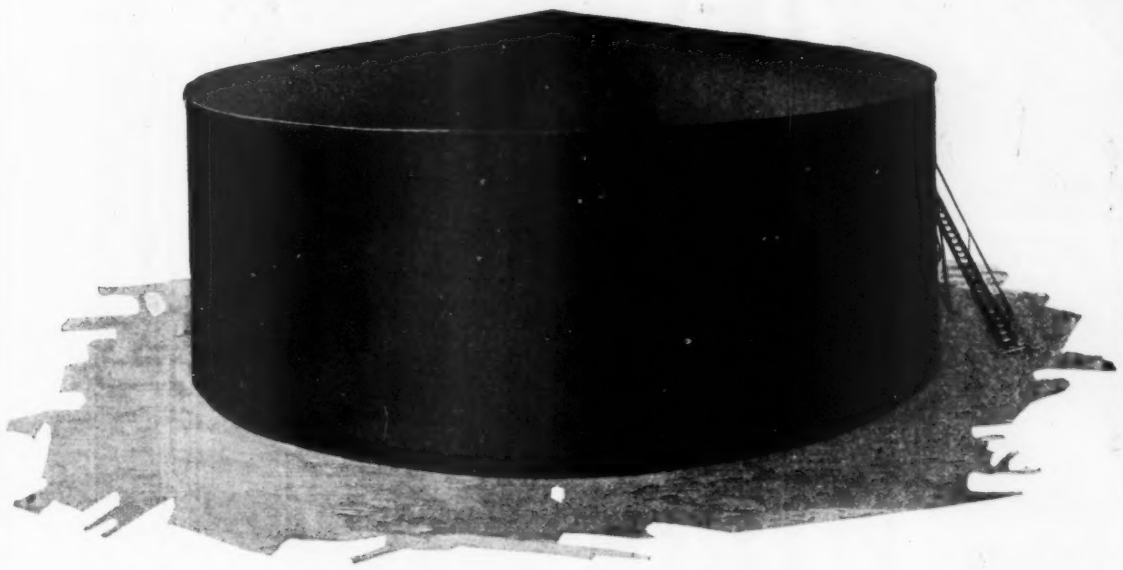
A summary of the week's work in the Kentucky Field shows 16 completions, 12 producers with a flush of 109 bbls., 3 dry holes and 1 gas well. Compared with the previous week, there were 16 less completions, 12 less producing wells, 57 bbls. less production, 5 less dry holes and 1 more gas well. The wells were distributed by counties and districts as follows:

County—	Oil Comp.	Wells	Prod.	Dry	Gas
Barren	5	2	8	2	1
Warren	3	3	27	0	0
Owensboro	2	2	45	0	0
Lawrence-Johnson	2	2	15	0	0
Wolfe	2	2	9	0	0
Carter	1	1	5	0	0
Allen	1	0	0	1	0
Total	16	12	109	3	1
Last week	32	24	166	8	0
Difference	16	12	57	5	1

Drilling to Start

The coming week will see more active development in all fields if the water supply is replenished. The scarcity of water has delayed many of the wells that were drilling in some sections while in

(Continued on Page 94)



Prevention

IS THE BEST FORM OF

Fire Insurance

The vapor-tight steel roof tank, when expertly built and equipped, is both a practical and economical fire prevention measure, because:

P.I.W. STEEL PLATE CONSTRUCTION

The initial cost compares favorably with makeshift forms of storage.

It keeps vapor accumulations, the source of danger and a great loss in themselves, down to a minimum.

It can be furnished in convenient sized units—from 500 to 120,000 barrels.

After years of service it has an attractive salvage value.

It earns actual cash savings on insurance premiums.

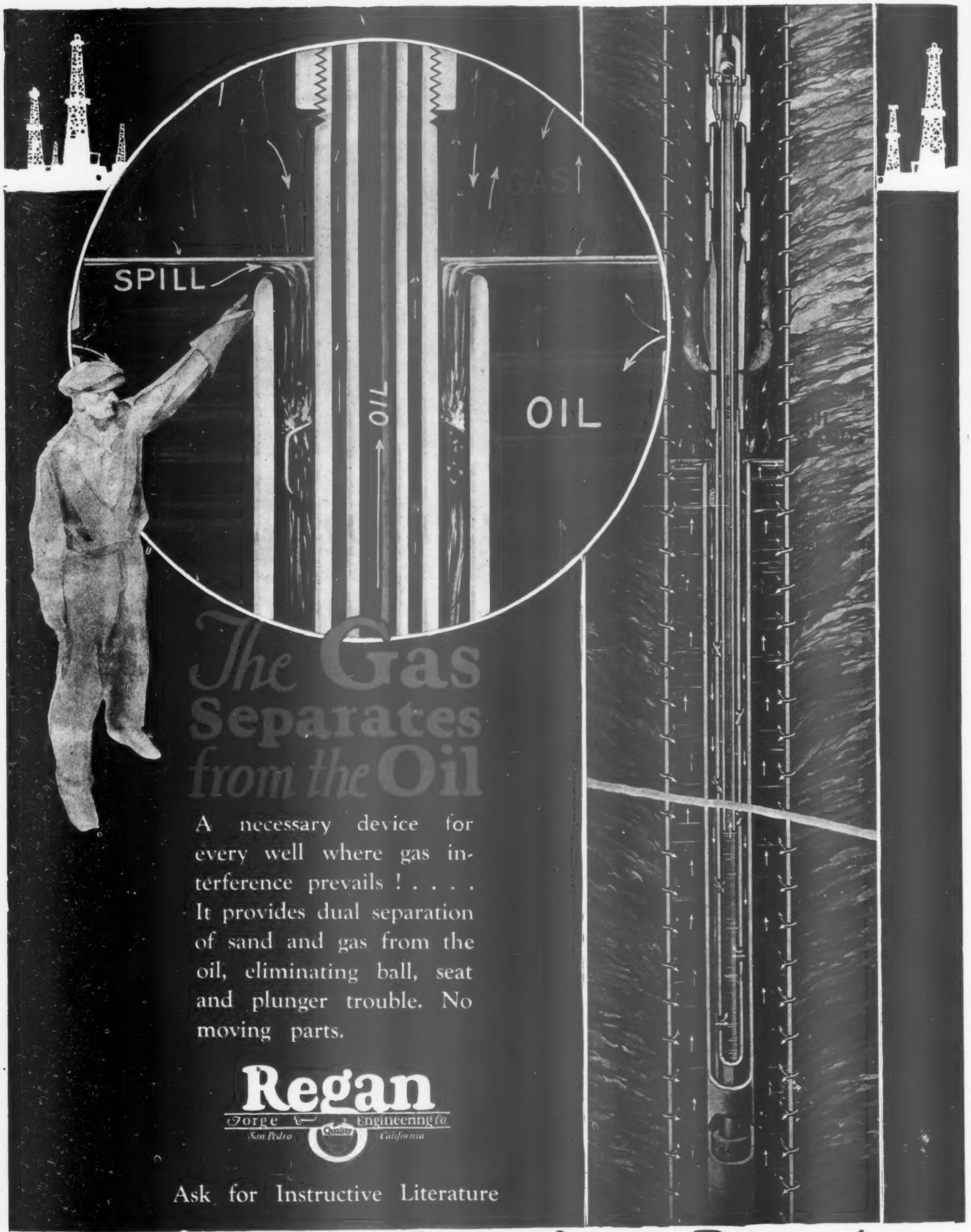
P. I. W. builds the vapor-tight steel roof tank with a skill that only long experience and an unusual shop and field organization can give.

No P. I. W. tank of this type has ever been ignited by lightning or figured in a fire of serious proportions.

Let us give you a Quotation.

THE PETROLEUM IRON WORKS COMPANY
PLANTS: SHARON, PENNA., AND KANSAS CITY, KANSAS
SHARON, PENNSYLVANIA
NEW YORK ST. LOUIS TULSA HOUSTON KANSAS CITY

YOUR • WELL • NEEDS • THIS • BOOSTER



The Gas Separates from the Oil

A necessary device for every well where gas interference prevails ! . . . . It provides dual separation of sand and gas from the oil, eliminating ball, seat and plunger trouble. No moving parts.

Regan
Forge & Engineering Co.
San Pedro — Quality — California

Ask for Instructive Literature

Regan Production Booster

NEW YORK CITY, Evening Post Bldg., 75 West Street — HOUSTON, TEXAS, Regan Sales Co., 1521 Post-Dispatch Bldg. — TULSA, OKLAHOMA, 227 Mayo Bldg.

Natural Gas Developments

ROYALTIES FROM GAS ARE NOT SUBJECT TO TAX

AUSTIN, Tex., July 17.—Money received as royalty or lease rental from gas wells is not subject to the gross receipt tax imposed under the Gas Utilities Act, the Attorney General's Department has advised Clarence E. Gilmore, chairman of the Railroad Commission.

The department also held that a gas company engaged exclusively in interstate commerce could not be held for the tax, and that neither could a company which sells casinghead gasoline to another corporation, which extracts the gasoline and sells the residue gas for public use.

All the opinions were written by Ernest May, assistant attorney general.

"We have come to the conclusion that your question is to be answered in the negative, since a lessor or royalty owner does not own, manage, operate, lease or control any wells, pipeline, plant, etc., or any of the kinds of business specified in Article 6050," May wrote Chairman Gilmore. "In other words, the royalty owner is not an operator. While he owns the land on which a well is situated and has leased the land or sold the gas in place, he is not a utility, and, therefore, as we construe the law, does not come within the terms of Article 6050."

In a fourth opinion, also addressed to Chairman Gilmore, May held that the gross receipts derived from the sale of natural gas by a producer on one lease to an operator on a neighboring lease for drilling purposes, where the pipeline passes under a public road, railroad, or the pipeline of another public utility, is subject to the tax imposed by the Gas Utilities Act. On the other hand, if the line in question does not run under a "public road, railroad or pipeline of another public utility," the gross receipts are not subject to the tax.

VENTURA AVENUE FIELD AS PRODUCER OF GAS

LOS ANGELES, Calif., July 17.—With the production of wet petroleum gas in the Ventura Avenue Field running close to 200,000,000 feet per day, the Shell Co. of California, one of the three large operators in that field, is preparing to build an absorption plant with a capacity of 60,000,000 feet per day, according to field reports. The plant is intended to supplant the Shell's present gasoline absorption plant, which has a capacity of about 30,000,000 feet per day.

Men and teams are busy grading the site of the new project on top of the hill north of the girls' school on the south side of the field, and directly west of the Associated Oil Co.'s Lloyd No. 18 well, the southern outpost of the field.

The Ventura Avenue Field is at present the greatest producer of natural gas in California, topping the Signal Hill Field, which has led the state for four years, but which has shown a substantial decline during the last year. The quality of the Ventura gas is not as high as the quality of the Signal Hill gas, which runs as high as two and one-half to three gallons of casinghead gasoline per 1,000 feet of gas. The Ventura Avenue gas runs between one-half and one gallon, although there are instances where it reaches two gallons per 1,000 feet.

The high pressure of the Ventura Avenue gas zones is held responsible for the fact that the gasoline content is no greater. Oil field practice has shown that the lower the pressure the richer the gas and, while the volume of gas produced by any well generally decreases after the well has produced for some time, it not infrequently occurs that the total gasoline recovery is greater, due to the lower pressure under which the gas is produced.

ORIGINAL SPEECHLEY SAND WELL IS NOW BEING CLEANED OUT

By Joseph W. Orr

OIL CITY, Pa., July 17.—Men in the employ of the United Natural Gas Co. are cleaning out the old first well drilled in the Speechley sand in Pinegrove Township, this county.

According to the best information obtainable, natural gas was first used generating steam to pump an oil well on Oil Creek in 1862.

In 1867 D. G. Stillwell (Buffalo Joe) drilled a well at a point almost directly to the rear of the Smith Center streets, The well produced gas instead of oil. The owner drilled two more holes and piped the gas to a few homes and stores in the immediate vicinity. One of the stores—that of the late Capt. Thomas R. Cowell—had one of these lights burning in its front window as an advertisement and novelty. The erratic character of the pressure made the use of buring gas too dangerous to permit this pioneer plant to be operated any length of time.

About 1880, after inventions that regulated the pressure from gas wells, Thomas Johnston and Doctor Haldeman drilled a well on Porkey Run in Pinegrove Township, near McPhersons Corners. The gas pressure was unprecedentedly large and the man in charge of the lease used the flow to fire his boilers and attached pipes wherever possible and fired what gas escaped from them. The heavy flow attracted the favorable attention of Messrs. Strong and Porterfield of Oil City. They leased adjoining property and proceeded to drill wells in many directions, finding gas in the second and third sands. This they collected and sent to Oil City through a pipeline of 5⅝-inch casing for manufacturing and household purposes and for lights. The distance was approximately 8 miles and the pressure at no time exceeded 200 pounds.

In 1885 the late Samuel Speechley, who owned a farm adjoining the McPherson, decided to drill it for oil, believing that it was underlaid by the Bradford sand. He was prepared to sink the drill 3,000 feet, but when the bit had penetrated to a depth of 1,900 feet on April 13 of that year what has since been known as the Speechley sand was penetrated and the gas pressure was great enough to more than sustain the weight of the tools, which bounced as though on inflated rubber cushions. Mr. Speechley immediately started work on a second well, which proved to be the largest gas well of history, with the exception of the Big Moses in West Virginia. The roar of the escaping gas from No. 2 well could be heard for miles. The company laid a 5⅝-inch line to Oil City, with branches to Franklin and Titusville. When controlled the pressure from the well proved to be 600 pounds to the square inch. The other wells that had been drilled and piped to town were shut off temporarily and the output of the Jumbo was turned into the line and its output proved to be sufficient to supply all demands. When No. 1 well came in a pipe was thrust down the hole, the pressure was too great to permit any hope of making a connection, and the flow was turned into the lines of the Oil City Gas Co. Hundreds of wells were drilled in the southern parts of Rockland Township, this county, to Tionesta in Forest County, the pool proving to be about 30 miles long by 3 miles wide.

Among the local gas companies organized and operated immediately after the discovery well were Oil City Fuel Supply Co., Strong & Porterfield, founders; Columbia Gas, Light & Fuel Co., owned principally by Franklin investors, with Joseph W. Grant and Daniel Grimm the most prominent; Manufacturers Gas Co., J. B. Smithman, this city, owner; Henry Suhr and Louis Walz and others organized the Venango Gas Co. principally to pipe the fuel to what is now the Pennzoil Co. refinery, in which they were also the principal owners. The output of the Columbia was piped principally to Franklin, Meadville and Sharon. A combination of all these lines was affected with the name of Oil City Fuel Supply Co., which later was taken over by the United Natural Gas Co., which had its birth in McLean County.

Considering the inflammable and explosive nature of natural gas the district has been singularly fortunate in escaping accidents. Some years after the big well tapped the sand, its flowing output was fired by a bolt of lightning and the roar of the flames could be heard for miles, the sound resembling that made by the approach of a terrific wind storm. Trees, brush and vegetation within a large area were shrivelled to cinders and it required much time and considerable ingenuity

(Continued on Page 110)

REPRESENTATION PLAN FOR GAS CO. EMPLOYES

Three important additions have just been made to the companies which handle industrial relations matters through employe representation plans.

At Cleveland on June 2, the management and representatives elected by the employes of the East Ohio Gas Co., and East Ohio Producing & Refining Co., met for the first joint conference. On June 3 and 4, at Pittsburgh, Pa., as reported were held similar meetings. The Hope Natural Gas Co., Hope Construction & Refining Co., and Reserve Gas Co., met as a group on the first of these occasions, while on the second day, the Peoples Natural Gas Co. had its first conference. George H. Jones, chairman of the Standard Oil Co. of New Jersey, made the trip accompanied by Christy Payne, C. J. Hicks and T. H. A. Tiedemann, in order to be present.

At each meeting a joint agreement was adopted similar to that now in force in the marketing department of the Standard Oil Co. (N. J.), and in the Carter Oil Co. The ranks of the employe representatives of the Standard Oil family have thus been increased by 75 new men, elected by approximately five thousand employes. Employe representation has, as far as the parent company and its subsidiaries are concerned, now entered into new fields in that these companies are actual distributors of gas to the public of large cities for fuel and light. This fact, says The Lamp, brings into the plan groups whose occupations and duties are different from anything heretofore represented—a fact which really applies to the entire units except that the production and distribution of gas through pipe lines is quite similar to the field work in the oil companies.

Inasmuch as these were inaugural meetings it was necessary that the function of the plan be explained to most of the management and employe representatives present. At each meeting this duty was performed by C. J. Hicks, executive assistant to the president.

The Cleveland meeting was presided over by M. B. Daly, president of the East Ohio Gas Co., who introduced Mr. Jones, who gave the meeting an interesting talk on the history and growth of the organization, its finances and the success of the plan. He was followed by Mr. Payne, vice president of the East Ohio Gas Co., who made a point of the fact that one reason for the successful application of the company's labor policy is that the executives have, practically without exception, risen from the ranks and therefore know the personnel problems of the whole organization.

Speeches were made by Charles H. Taylor, Lee Spidel and E. Lewis, representing the employes, and by Ralph Gallagher, general manager; William Kennan, Mike Murray and W. S. Kiser, who are representatives of the management. The more technical points of operation and routine of the plan were discussed by T. H. A. Tiedemann, assistant to Mr. Hicks, and L. M. Ayers, who has recently been put in charge of industrial relations in the gas companies.

John B. Corrin, vice president of the Hope Natural Gas Co., presided at the Pittsburgh meeting of June 3. In addition to the toastmaster and the men from New York, talks were made by A. V. Hoenig, vice president; H. C. Cooper, chief engineer; Jack Evans, general superintendent; W. B. Gribble, G. A. Kinley, and others of the management. Ralph A. Gawthrop, R. T. Reep and W. A. Caldwell, who spoke for the employes.

On June 4 at the William Penn Hotel, Pittsburgh, representatives met to install the plan in the Peoples Natural Gas Co. John B. Tonkin, vice president, was master of ceremonies. Mr. Jones and Mr. Payne made their third speeches in as many days and Mr. Hicks again discussed the principles and functioning of employe representation. The joint agreement was adopted, and interesting talks were made by James Donald, Charles Phillips, James Shillitto and Bryant Weber, for the employes, while R. D. Beardsley, treasurer; E. W. Williamson, assistant general manager; James Henderson and A. R. Gray spoke from the management viewpoint. Mr. Tiedemann again gave a few pointers to the newly elected representatives, after which L. M. Ayers made a short talk.

MONROE ROCK PRESSURE IS HOLDING UP WELL

SHREVEPORT, La., July 17.—Preliminary work in the gauging of the Monroe gas field reveals the field to be in excellent shape, according to H. L. Williford, in charge of the Shreveport office of the Louisiana Conservation Commission. The rock pressure of the field is holding up better than expected, according to the gaugers. Improvement is noted in particular around the overdeveloped Swartz area where the edge water encroachment was menacing the field. The Conservation Commission ruling requiring operators to maintain a 200-pound pressure at the well, is bringing about desired results and seems to be the proper remedy for the menace, conservation officials said.

The rock pressure of the wells in the field is taken quarterly and the open flow capacity is gauged semi-annually. More than a month is required to complete the task. So far the gaugers have found the rock pressure of the wells slightly increased when averaged and compared with the last report of the field's condition.

SEEKS NEW DEEP GARBER SAND

OKLAHOMA CITY, Okla., July 17.—The Texas Pacific Coal & Oil Co., which some time ago contracted to take over and deepen a well drilled by the Franklin Oil Association in 28-18n 4w, has begun operations and will drill the hole to 4,500 feet or more in the hope of finding the new deep Garber sand. It was drilled to 3,905 feet and contained gas showings from 3,877 to 3,903 feet. Water drowned the gas production.

EQUIPMENT AND SUPPLIES

MORE PLUNGER TRAVEL IN NEW PUMPING JACK

The lure of increased production is a constant stimulus to continuous effort on the part of manufacturers to provide equipment that will achieve it, and operators are ever ready to test and to adopt new ideas promising such results.

It was this element which prompted the D&B Pump & Supply Co. of Los Angeles, to believe a new high standard in pumping jacks could be evolved, and its new Simplex, after due test and usage, it says, has confirmed the contention. Its original pumping principle is quite an innovation, but proved sound in practice. Instead of the accustomed 75 feet of plunger travel per minute, where the walking beam is used, the D&B Simplex Jack gives 150 feet of travel, or, in other words, just double the previous travel. This is based upon a speed of 25 strokes per minute, the polish rod straight line travel, at this speed, being 6 feet 1⅝ inches. When the fluid is there, these features, it is said, greatly increase production. There is one example at Santa Fe Springs where, it is reported, the use of this jack has resulted in 20 per cent added production.

The fundamental mechanical principles involved in this jack are, as described by the manufacturers, "a straight line polish rod action, increasing and decreasing in velocity with simple harmonic values. A rotation counterbalance eliminates the impact on the reversal of each stroke. The jack has antifriction, heavy duty bearings for every moving part. The simplicity of design and especial ease of operation elicit the most favorable commendation. The jack rests directly upon the floor of the derrick and can easily be skidded back for pulling operations. It is of rigid, sturdy construction throughout, and is self-contained." These features, it is said, safeguard, fully, against all detrimental strains upon the rig in which it is installed. It operates without a gear reduction unit when direct motor driven, and also can be operated by a chain from the calfwheel sprocket on the bandwheel shaft, at any desired speed, or by an independent reduction gear unit.

ADOPTS RICARDO TYPE COMBUSTION CHAMBER

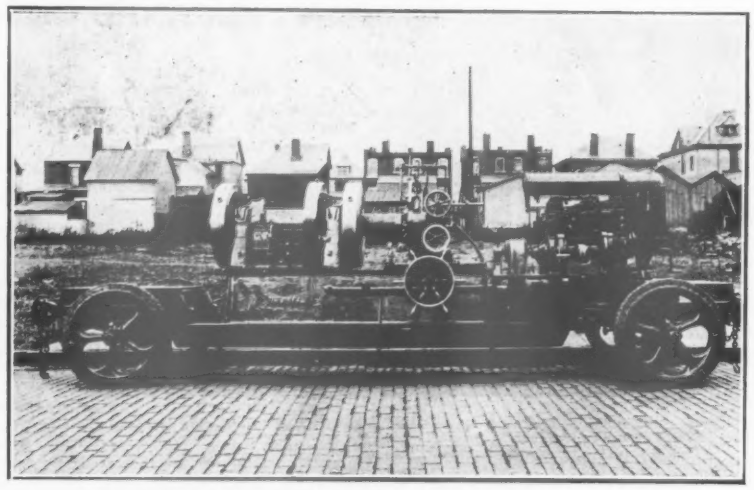
The Harley Davidson Motor Co. of Milwaukee, Wis., manufacturers of motorcycles, has adopted the "Ricardo" type of combustion chamber for its new type of machine. The new "single" cylinder machine makes 80 miles per gallon—a striking example of "Ricardo" head economy. The company is manufacturing this under license from the Waukesha Motor Co., Waukesha, Wis., builders of heavy duty engines for over 20 years.

On the basis of May operating analysis Waukesha Motors Co., in dollars production, shows an increase of 271 per cent over January, 1925. This is compared with an increase of 170 per cent for the whole industry over the same period as portrayed in the monthly analysis put out by the Motor and Accessory Manufacturers Association.

CLIMAX ENGINE STATIONS

The Climax Engineering Co., Clinton, Iowa, anounces the appointment of the H. J. McClenahan & Co., 615 Water Street, Baltimore, Md., as official parts and service station for Climax engines, and the appointment of the Maerky Machine Works, 240 Cherry Street, Philadelphia, Pa., George M. Strohlein, proprietor and manager, as official parts and service station in the city of Philadelphia and vicinity.

NEW PORTABLE PIPE THREADING MACHINE



A portable pipe threading machine is being made by the Landis Machine Co. of Waynesboro, Pa. It is designed for oil field use to cut and thread pipe and casing efficiently and economically.

One of the first users was the Pure Oil Co., who purchased an 8-inch machine with a Landis chaser grinder. These machines are mounted on a specially built trailer made by the Highway Trailer Co. of Edgerton, Wis. The machine is equipped with all the necessary chasers for cutting and various diameter pitches and tapers of threads used in the oil fields.

While this machine was primarily designed for oil field service, its scope and use are not confined to that industry, but might be used for maintenance work in large plants.

NEW LIGHTING CONCERN

Frank E. Hutchison

The Hutchison Engineering Works, 549 Washington Boulevard, Chicago, Ill., has been organized to market a new idea in "Flolight" lighting plants and floodlights, by Frank E. Hutchison, who for 13 years represented the Moon Manufacturing Co. in the oil country. Mr. Hutchison has a wide circle of acquaintances and his company will concentrate on the lighting problems of the oil industry. The "Flolight" is referred to in the literature of the company as a gas or gasoline electric lighting plant, suitable for lighting oil and gas drilling wells, camps, leases, gasoline plants, refineries and oil and water pumping stations.

NEW YORK EXPORT OFFICE

Indicating that it is going to back up its previous activities in foreign oil fields the Emsco Derrick & Equipment Co. of Los Angeles, Calif., now announces the establishment of its own New York office at 150 Broadway, opened for business July 1. The New York office is strictly for the convenience of Emsco's eastern clients, as well as for the users of Emsco equipment in foreign countries. It will be possible, it is announced, to give personal supervision to the forwarding of shipments, attention to papers and other details of transportation, etc., in a much more satisfactory manager. Also, the New York office will be in closer touch with the foreign trade, as well as with domestic fields, and enabled to assist in securing competent men for clients whenever good men are available. Fred L. Convers, who has had many years of experience in foreign as well as local fields and enjoys a wide acquaintance among foreign companies and operators, will be in charge of the Emsco Co.'s New York office. Mr. Convers has been active in foreign oil fields since 1911 when he was located in London for the Oil Well Supply Co., covering Russia, Rumania, Turkey and other European countries until the war, when he returned to Pittsburgh. Later he went to Mexico for the same company, establishing shops in Tampa and covering all the Mexican productive fields.

DIESEL ENGINE ORDER PLACED

The De La Vergne Machine Co., through its western office at Houston, Tex., of which G. A. Palmer is manager, has taken another order from the Magnolia Pipe Line Co. of Dallas, Tex., for eight 200-horsepower vertical De La Vergne solid injection Diesel oil engines. This order is an addition to 24 other De La Vergne solid injection engines which the same company has purchased in the past two years.

OPENS CLEVELAND SALES OFFICE

Hills-McCanna Co., Chicago, announces the opening of a sales office in charge of Harry Hartling, Room 832 Guardian Building, Cleveland, Ohio. Mr. Hartling will have charge of engineering and sales work on Hills-McCanna nonferrous alloys and products for corrosion resisting service, as well as the force feed lubricators and steam specialties manufactured by the company in Ohio, western New York and western Pennsylvania.

SIMPLE SUMP PUMP PLACED ON MARKET

The Worthington Pump & Machinery Corp., 115 Broadway, New York City, has recently placed on the market an extremely simple sump pump, free from complicated piping, for the draining of sumps located in cellars of buildings below the sewer level. This pump operates on the same general principle as the Worthington Axiflo deep-well pump, which has been in extensive use for years and which, it is said, is characterized by its simplicity, compactness and ability to handle a large volume of water at minimum cost, characteristics also of the Axiflo sump pump.

The Axiflo sump pump consists essentially of a driving head supporting a drop pipe within which is a shaft containing one or more Axiflo open type impellers and guide vanes. The drop pipe, in addition to supporting the impeller section of the pump, serves to conduct the water to the top of the pump, thus eliminating the necessity of using the usual separate discharge pipe. The impellers are of such shape as to give practically an axial flow of water. There are no shrouds, wearing rings or close clearances of any kind, thus making the pump particularly adapted to sump service where dirty water is likely to be handled. The shaft to which the impellers are secured is amply supported within the drop pipe by means of oil lubricated bearings. A cover pipe encloses the shaft above the impeller section preventing the entrance of water, sand or grit into the shaft bearings. Oil is supplied to the cover pipe by means of a suitable lubricator mounted on the driving-head frame. On the top of the driving head is mounted a vertical motor, the thrust bearing of which carries the pump thrust load. This motor is automatically controlled by means of a float switch.

The manufacturer adds that as the impellers and all other rotating parts are perfectly balanced there is no vibration; the pump is, hence, practically noiseless in operation. Among the features claimed by the manufacturer are compactness, simplicity, absence of complicated piping, ease of installation, low maintenance and operating costs and long life. The pumps are made with one to four stages for all sump service capacity and head requirements.

OPENS FORT WORTH BRANCH

Increasing business in the vicinity of Fort Worth, Tex., has reached a volume which necessitates special arrangements to handle it, according to an announcement of Joseph Greenspon's Sons Iron & Steel Co., of St. Louis, Mo. It has accordingly opened a branch office in the First National Bank Building, Fort Worth, for the purpose of maintaining direct contact with oil interests in east Texas. Quicker service for customers is the purpose of the Greenspon Co. in making this step. The Greenspon Co.'s present branches and yards at Ranger and Breckenridge will be continued.

NEW AXELSON OFFICE

Work is rapidly progressing upon the construction of the large new office building on the grounds of Axelson Machine Co., in Los Angeles. Practically all of the masonry and roughing-in work was completed by July 1 and the finish crews are now at work so that the structure will probably be ready for occupancy within a few days. As soon as the new offices are completed and the administrative force has had an opportunity to get completely settled a general housewarming is to be given and a reception day to be announced later.

XUM

As It Comes From the Well

Cabin Creek Crude gives the Pure Oil Company a big lead in refining. The quality is there to begin with,—a much simpler matter than trying to create quality synthetically.

Such material insures your supplies exactly on specification —and service on the dot.

Pure Oil Company alone has this premium crude advantage.

And Pure Oil is in a class by itself in Service, — Delivery — Action.

Wire, Phone or Write.

SPECIAL
Crank Case Flushing Oil
85 to 100 @ 100 Vis.
1½ to 2 Color
Petrolatum

THE PURE OIL COMPANY

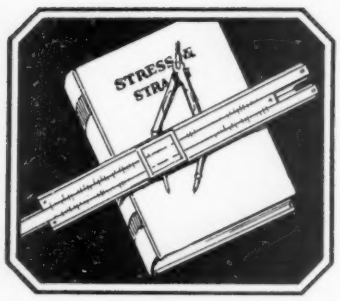
General Offices: COLUMBUS, OHIO

Independent — and successful, through unvarying high quality in all its products

Refineries at:
MARCUS HOOK, PA.
WARREN, PA.
HEATH, OHIO
CABIN CREEK JCT., W. VA.
SMITH'S BLUFF, TEXAS
MINNEAPOLIS, MINN.
CUSHING, OKLA.
ARDMORE, OKLA.
MUSKOGEE, OKLA.

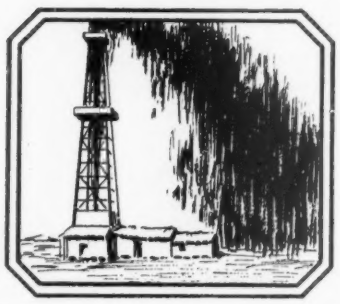
Branch-Offices at:
CHICAGO
NEW YORK
PHILADELPHIA, PA.
BEAUMONT
WARREN, PA.
MINNEAPOLIS
PITTSBURGH
TULSA, OKLA.
CHARLESTON, W. VA.
ATLANTA, GA.
PENSACOLA, FLA.

When You are a Customer
Your Equipment Money Buys —



Engineering Knowledge

International "IDECO" Equipment represents the application of the highest standards of approved engineering theories and formulas, first grade material and manufacturing processes to accomplish the most practical and efficient equipment for use in the Oil, Gas and Artesian industries.



Actual Experience

International "IDECO" equipment is backed by experience from thousands of IDECO installations in the service of major oil companies under all imaginable conditions in almost every oil and gas field on this and foreign continents.
All IDECO designs and initial equipment are tested in the field at International's expense—not the customers'.

Confidence

The International Derrick & Equipment Company is today the world's largest concern of its kind. Its sound business policies and the uniform high quality of its products should make International the leader 10 years from today. Every "IDECO" purchaser has absolute confidence in the integrity of the company he deals with.

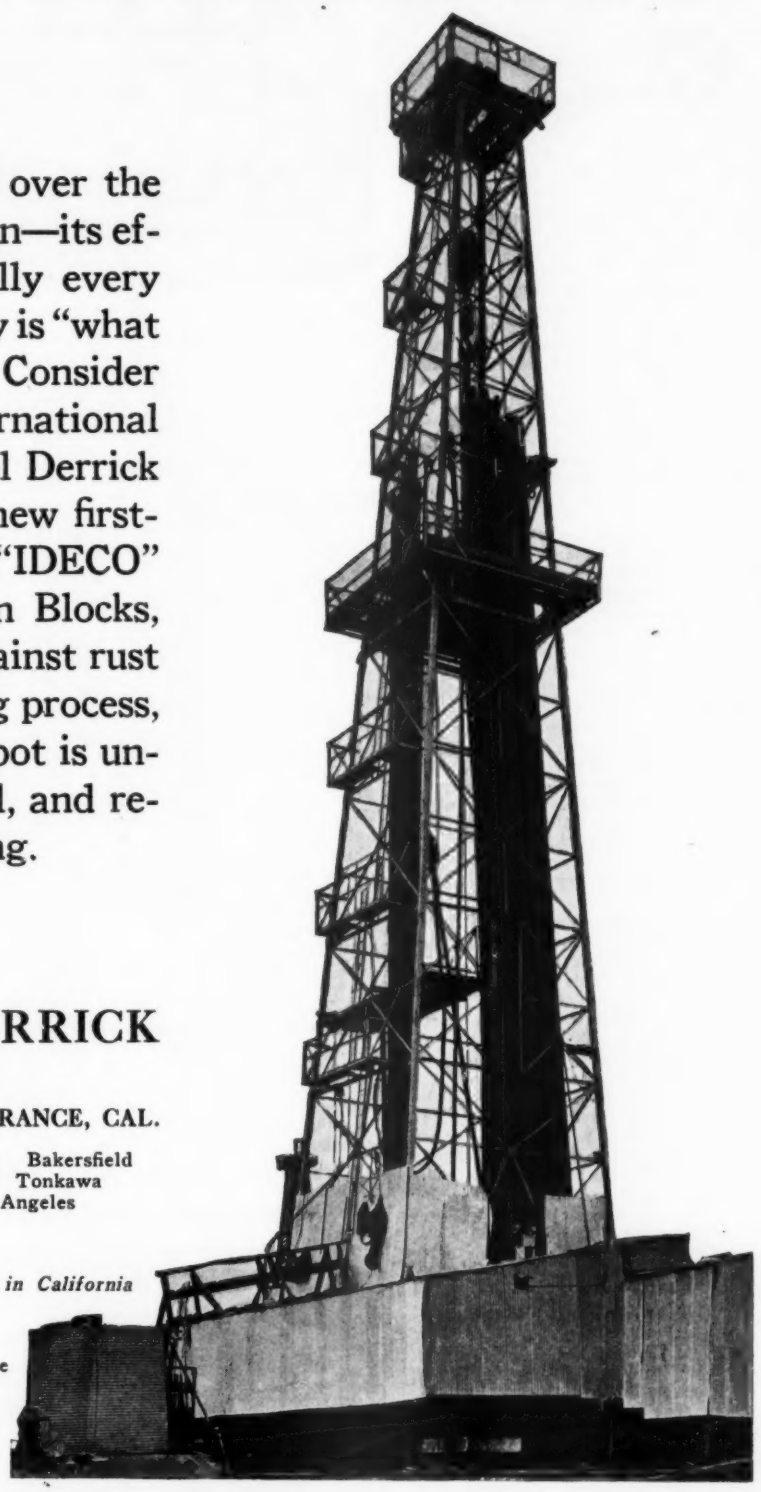
World-wide Service

"International's" business is exactly what its name implies, as shown by its widespread use among important oil companies, both here and abroad. IDECO Warehouses and Yards, local to every active field, provide the operator with quick delivery and satisfactory service at all times.

INTERNATIONAL STEEL IDECO DERRICKS (GALVANIZED)

of International "Ideco"

The superiority of the Steel Derrick over the wooden derrick need not be dwelt upon—its efficiency has been proven in practically every field in the country. The question today is "what kind of a steel derrick shall I buy?" Consider them all, and then remember that International "IDECO" offers you a structural Steel Derrick built entirely by "International" of new first-grade material–no seconds, no rejects. "IDECO" equipment—Derricks, Wheels, Crown Blocks, Walking Beams, etc.—is protected against rust indefinitely by the hot dip galvanizing process, applied after fabrication. The paint pot is unknown on an "IDECO" equipped well, and repairs are reduced to practically nothing.



THE INTERNATIONAL DERRICK & EQUIPMENT CO.

COLUMBUS, OHIO - - TORRANCE, CAL.

Dallas Denver Tulsa Shreveport Houston Casper Bakersfield
Oil City Wewoka Smackover El Dorado, Kansas Tonkawa
Wichita Falls Corsicana Mexia New York Los Angeles

CALIFORNIA NATIONAL SUPPLY CO.—Distributors in California

The largest company devoted exclusively to the manufacture of steel (galvanized) equipment for the oil, gas and artesian industries.

INTERNATIONAL STEEL IDECO DERRICKS (GALVANIZED)

EQUIPMENT AND SUPPLIES

OIL ENGINES RECLAIM THE WATERLESS DESERT

In the waterless desert, where natural power does not exist, oil engines are developing profitable industry by generating accessible power. A striking example may be found at Gerlach, Nev., where in the granite mountains, a rich deposit of rock gypsum was discovered. It was 10 miles from the railroad and coal was not obtainable. There was neither power, nor water, and no housing facilities. The climate moreover ranges from 40 degrees below zero to 115 degrees above.

A great mill has been erected and is running full blast, a 5-mile aerial conveyor has been provided, a plant railroad built, an attractive village constructed, and a large power house. Where once the desert lay silent and untouched, engineering skill has created a busy hive of production—manufacturing one of the greatest industrial necessities, plaster.

All this has been made possible by the utilization of one of the largest direct-injection oil engine installations in industrial service. The machinery about the mill is driven by electric motors, the power being generated by three 8-cylinder 800-horsepower Ingersoll-Rand engines, each connected to an electric generator. Special open-air construction was used to facilitate the radiation of heat from the conductors. These 800-horsepower engines use heavy fuel oil and employ the same principles of fuel injection as the engines used in the oil-electric locomotives. Oil engines such as these, utilizing a minimum amount of precious water, are available in the Nevada desert. The same economy in water applies to the oil-electric locomotives.

UNUSUAL CONSTRUCTION

The States Engineering Co. of Baltimore, Md., has distributed a folder describing the merits of its product, the Senco oil gauger. This tool is used for gauging the contents of oil tanks, and is unusual in construction. It consists of a steel tape ¾-inch wide and 50 feet long, graduated into feet and eighths of inches enclosed in a metal housing.

The tape has a plumb bob attached to the end. At the lower end of the housing are two babbitt wipers that bear on each side of the tape as it is wound into the housing. When a gauge has been made, the tape is wound up, and as the oil covered portion of the tape passes through the wipers, the oil is cleaned off. Adjustable set screws permit the pressure of the wipers to be released.

NEW TRADE BULLETINS

The L. C. Camblin Co. of Tulsa, Okla., has issued two folders; one on the Castle rotor beam hanger, and the other on the Huffman double packed double roller oil saver.

—

The Dorland Agency, Ltd., of London, England, has distributed two issues of a series of booklets on British Empire Markets. These booklets have been prepared with the idea of giving the British manufacturer in a concise manner, pertinent facts and information regarding the trade opportunities in the countries dealt with. The information contained should be of equal value to the American manufacturer.

SALES OFFICE IN HOUSTON

The Reading Iron Co. has opened a sales office in Houston, Tex., with R. D. Oberwetter in charge. Mr. Oberwetter was formerly in the purchasing department of the Humble Oil & Refining Co. at Houston. The district office will cover South Texas and Louisiana.

TO ENLARGE "IDECO" PLANT AT TORRANCE

The International Derrick & Equipment Co. of Columbus, Ohio, announces that plans have been made for enlarging its plant at Torrance, Calif., in order to increase the speed and efficiency of its service.

This concern owns and operates steel fabricating and machine shops, die and tool works, woodworking, galvanizing and shepardizing plants and a foundry at Columbus, Ohio. Fabricating assembling and service plants are maintained in various fields throughout the oil country.

INCREASED FACILITY IN SETTING CASING

The Baker Casing Shoe Co., Huntington Park, Calif., adds to the group of Baker oil well specialties by the introduction of a new cement shoe. As the setting of long and extremely heavy strings of casing on the bottom of the hole has developed into a quite frequent occurrence in most all oil fields, there has arisen the need for devices which will facilitate to the highest possible extent the operator's work at this stage in drilling.

The new Baker cement shoe has been developed with full cognizance of the problems to be met, and overcome, in performing this operation, with safety and speed. It is used to float the casing in the hole, and when set is also used to cement through. The many users of the Baker plain casing shoe will readily recognize in this new device its combination with a solid cast iron rotary hole guide, and an internal cast iron plug, with a back pressure valve. Holes are drilled in the shoe below the valve, permitting cement to pass out into the formation. These holes are kept free and open by reason of the shoe having a full three-sixteenth inch larger cutting edge below the holes. To cover the various pipe sizes ordinarily used in drilling, this new shoe is made in all standard sizes.

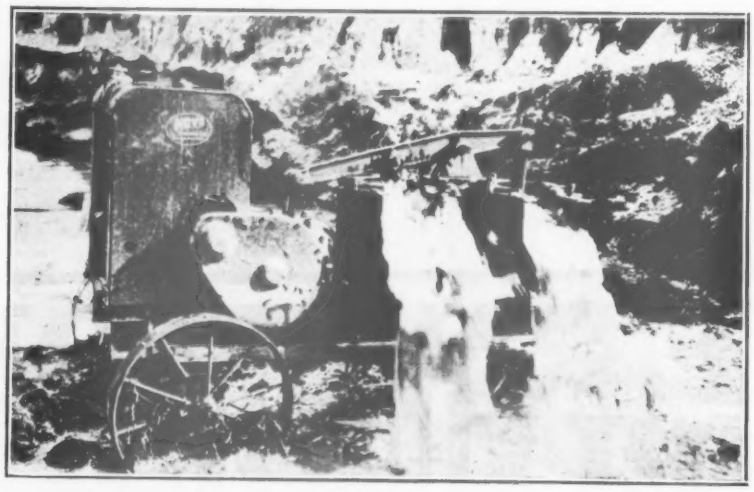
GEO. M. DYKE ASSISTANT SEC'Y.

George M. Dyke has been elected assistant secretary of Chain Belt Co., manufacturers of concrete mixers, elevators, conveyors and chain under the trade name "REX." Mr. Dyke is to fill the vacancy caused by the resignation of C. E. Stone, who resigned to become vice president and general manager of the Interstate Drop Forge Co. The two companies are affiliated. F. M. Lowum was elected assistant treasurer. Other officers of the Chain Belt Co. are: C. R. Messinger, president; C. F. Messinger and J. C. Merwin, vice presidents; Brint Welser, secretary; C. L. Pfeifer, treasurer and William C. Frey, E. L. Wood and H. O. Seymour and Donald Frazar, directors.

WORKING BARREL FOLDER

A new descriptive folder illustrating working barrels and sucker rods and describing the function of working barrels has just been issued by Axelson Machine Co. of Los Angeles. Enlarged drawings of oil well pumps are embodied in the folder so that readers can get accurate idea of the operation. Copies may be obtained by writing to the manufacturers.

PUMPING UNIT HAS UNIQUE FEATURES



A new pumping unit was developed recently by the Novo Engine Co. of Lansing, Mich. The Novo rating on this pump is 16,000 to 20,000 gallons per hour. The pumps themselves are similar to those built in the past by Novo. It is the power unit speed reducing unit, and live rubber diaphragms, which make the outfit unusual. It is said to be the only one of its kind manufactured. The power unit is the 3-6 H. P., 2-cylinder, Timken tapered roller bearing engine. This engine has been brought out during the past few months.

TIMKEN CO. EXPANDING ITS CANTON, O., PLANT

The apparently never-ending growth of the transportation industry is an outstanding industrial phenomenon. Yet the industry as a whole has actually been out-paced by one of its principal members, the Timken Roller Bearing Co. Announcement has just been made that $1,500,000 is to be spent in expanding the Canton, Ohio, plant of the Timken company. Building plans have been completed and the new units are to be completed by January 1, 1927.

Still more extensive use of Timkens in every phase of transportation is expected, since the new construction program includes provision for enlarged laboratory and research facilities. The rapid use of the Timken company as suppliers of its product to industrial users, the company says, further warrants this expansion.

"Bearings of a high order of precision, capable of withstanding the abnormal speeds and advancing the extreme accuracy of machine tools and grinders," it announces, "have been developed and will be produced. In the past, Timken scientists have been successful in developing such features as the tapered bearing design, the 'positively aligned rolls' of Timken bearings, and the special electric furnace steel which only Timken produces, in its own complete steel mill. The output of electric furnace steel from the Timken mills is the largest in the world. Steel is required for production at the rate of 132,000 Timken bearings daily. The total of Timken bearings universally applied has reached 150,000,000."

ADDITION TO PLANT INSPECTED BY GUESTS

Recently, the Newton Process Manufacturing Co. played host to over 1,000 interested visitors. The occasion was the completion of a $50,000 addition to the Fullerton, Calif., plant. This new building was erected by the Austin Co. of California, covers an area of 100 by 180 feet, and is of steel construction throughout.

The growth of this California company has been rapid. Although organized only three years ago, it is making regular shipments of Newton absorption equipment to many oil producing areas. The company is officered by D. L. Newton, president; Waldo O'Kelly, vice president and treasurer; A. A. McCormick, secretary; W. J. Carmichael, general manager and J. E. Kobernik, general superintendent. Its products are marketed through all stores of the National Supply Co. and Hurley Brothers, Tulsa, Okla. The National Supply Corp. of New York and London is the foreign distributor.

NEW SUPPLY COMPANY

The Mutual Supply Co. has been organized at Houston, Tex., by John T. Harrington, George T. Oberwetter and H. H. Ratcliffe and will handle a line of oil field specialties, representing various manufacturers. The incorporators are all former employes of the Continental Supply Co. and well known in the southwestern fields. Office and warehouse are located in Houston.

USING MOTION PICTURES

The Lufkin Foundry & Machine Co. has adopted moving pictures as an aid to salesmanship. W. C. Trout, vice president and general manager of the company, has returned from a trip to the East and North, exhibiting moving pictures showing the use of its equipment in the Coastal and other fields of Texas and is now en route to California for the same purpose.

IDEAL SPRING HOOKS

THE
NATIONAL SUPPLY
COMPANIES

MEN KNOWN IN OILDOM

—(Courtesy Texaco Star)

R. Ogarrio

R. Ogarrio is assistant to D. J. Moran, vice president and manager of the production department of The Texas Company. Mr. Ogarrio was born in the State of Chihuahua, Mexico, and received his elementary and high school training at San Antonio, Tex. He took engineering courses at the Massachusetts Institute of Technology and the Sheffield Scientific School, Yale University, graduating in 1909. He became connected with The Texas Company in 1916, at Tampico, as assistant engineer, and in 1918 became assistant general superintendent of the refining and pipeline departments of The Texas Company in Mexico, later taking over the management of the producing department there. In 1923, he was assigned to the supervision of exploration work in Panama and South American countries, and in January was appointed manager of The Texas Petroleum Company, organized to operate in those countries. He came to Houston, Tex., in December, 1925, as assistant to Mr. Moran. He is a young man of proved ability and a personality that has won for him the admiration of superiors and the entire organization.

PERSONAL PARAGRAPHS

Don Moore, of the Moore Oil Corporation, has returned from a business trip to Fort Worth, Tex.

* * *

Waite Phillips, Tulsa, Okla. oil operator, has returned from a two months' pleasure trip to Europe.

* * *

Ralph C. Steinman, of the Sinclair Crude Oil Purchasing Company, has returned from a trip to the Texas fields.

* * *

George F. Bell of Tulsa, well known in the supply trade, was operated on for appendicitis at St. Johns Hospital, Tulsa, recently.

* * *

W. S. Farish, president of the Humble Oil & Refining Company, is at Sulphur Springs, Va., with his family for the summer.

* * *

W. F. Gates, George Coyle and C. R. Weidner, of the Prairie Pipe Line Company, have made a trip to the Texas Panhandle.

* * *

Martin Van Couvering, consulting geologist, with offices in Los Angeles, Calif., has returned after spending several weeks motoring through the Northwest.

* * *

Gillette B. Hill, of the Waite Phillips organization, has recovered from a serious medical operation and is back at his desk after a three months' absence.

* * *

Paul Weaver, formerly chief geologist of the Mexican Eagle Oil Co., has left Tampico, Mexico, for the United States, where he purposes engaging in private practice.

R. V. Johnson has opened offices in Calgary, Alta., for Dorsey Hager, petroleum geologist.

* * *

John R. Manion, president of the Sinclair Pipe Line Company, was in New York during the past week.

* * *

W. E. Ramsey, oil operator of Oklahoma City, has gone to California on a 10-day business mission. California interests have joined the Ramseys in their two wildcat enterprises on 20,000 acres of state land in Cimarron County.

* * *

John W. Anderson has been named as southwestern representative of the Ross-Meehan Foundries, manufacturers of oil field supplies, with Houston, Tex., as headquarters.

* * *

Elmer Close, of Tampico, Mexico, has been staying at the Lanier Hotel in San Antonio, Tex. He is in the oil business in Tampico, and came up for a short pleasure trip.

* * *

Charles Page, of Sand Springs, Okla., has purchased the old Bullion mine workings at Lewistown, Wyo. These mines are in the Lander district, 7 miles southeast of Atlantic City.

* * *

George H. Myers, assistant production superintendent for the Amerada Petroleum Corporation, has returned to Tulsa from a three weeks' visit with home folks at Altoona, Pa.

* * *

Herman Stabler, of Washington, D. C., chief of the conservation branch of the United States Geological Survey, has been spending some time checking up on conditions in the Salt Creek Oil Field.

* * *

Frank Buttram, president and general manager of the Buttram Petroleum Corporation, left recently for California, where he and his family probably will spend the remainder of the summer.

* * *

W. C. Brower, of New York, manager of the crude oil department of the Vacuum Oil Company, has returned East after making an inspection of the company's operations in the Gulf Coast region.

* * *

A tour of northern and northeastern Oklahoma was made recently by David Donaghue of Fort Worth, Tex., chief geologist and head of the land department of the Texas Pacific Coal & Oil Company.

* * *

Joseph B. Dabney, California oil producer, has made a gift of $40,000 to the Salvation Army for the erection of a permanent summer camp at Redondo Beach, to accommodate more than 2,000 during the summer.

* * *

E. E. LeMasters, superintendent of the Oklahoma Pipe Line Company, is in Colorado on his vacation and incidentally is taking in the oil fields throughout that state. He writes that a shale oil well near Steamboat Springs in Routt County is the present sensation out there.

* * *

After 20 years' service as general manager of the Shreveport Southwestern Gas & Electric Co., A. G. Curtis has resigned. He is succeeded by another veteran in gas circles, Marshall T. Walker, of Beaumont, Tex., where he was connected with that branch of the Shreveport company.

* * *

Blaine Johnson, general superintendent of drilling for the Crown Central Oil Corporation, has returned to Houston, Tex., following an inspection trip of the company's properties in Pennsylvania and Kentucky, which were part of the old White Oil Corporation's holdings.

* * *

John Sandburg, of Los Angeles, Calif., whose name is synonomous with the Long Beach Field because of his early work in that district, has disposed of his entire holdings in the Sandburg Petroleum Company and is resigning as president in order to take a rest.

* * *

Wesley Cunningham, of the General Petroleum Corporation, has been elected president of the recently organized Petroleum Accountants Society of Los Angeles, Calif. R. E. Hitt, of the Jameson Oil Company, is vice president of the new organization and M. G. Kerr, of the Union Oil Company, is second vice president.

George S. Norman has been appointed manager of sales for the Pierce Petroleum Corporation, with headquarters at St. Louis, Mo. He was formerly with the Tide Water Oil Company, his father, the late C. R. Norman, having been an executive of the Tide Water Company, and a pioneer in the Pennsylvania oil fields.

* * *

Scott H. Mashco of Findlay, Ohio, secretary and general manager of the Independent Torpedo Company, was in Casper, Wyo., several days. Mr. Mashco visited the company's factory at Shelby, Mont., before returning to Ohio.

* * *

C. E. Mahone, who has done considerable wildcatting up along the Balcones Fault and is a veteran in the business, is back to his home in San Antonio, Tex., after several weeks spent in Starr County, Texas, which he says is the land of hoot owls and oil. The hoot owls are in evidence everywhere after sundown. The oil can be seen only potentially yet.

* * *

D. J. Peters, formerly sales manager with the Transcontinental Oil Company, Pittsburgh, and Penn. Okla. Oil Corporation of Pittsburgh, Pa., and most recently sales manager for the Rio Grande Oil Company, Los Angeles, has just returned from one of his several trips through Utah, Idaho and Montana for the MacMillan Petroleum Products Company.

* * *

J. C. Lentz, who has charge of operations for Benedum & Trees in the Southwest, is in Houston, Tex., supervising a test drilling southeast of the Humble Pool. It is the first wildcat of the famous wildcatters in the Coastal country. Mr. Lentz has been connected with Benedum & Trees for many years, having supervised their operations during the early days of the north Louisiana fields.

* * *

William B. Way has been appointed manager of sales for the Superior Steel Pipe Company, Pittsburgh, Pa. Mr. Way for a long time handled the sales of one of the largest valve manufacturers of the United States from its Pittsburgh district. His contact has been principally with the water works and natural gas industry. For seven years Mr. Way held the position of secretary and treasurer of the Natural Gas Association of America, and of the Natural Gas Supply Men, Inc.

* * *

W. W. Fleming, of Tulsa, Okla., vice president and general manager of the Mid-Kansas Oil & Gas Company, and director of the Ohio-Mexico Oil Company, that is starting to wildcat for oil on a big block of land in Coahuila, Mexico, passed through San Antonio, Tex., en route to Saltillo, Mexico, for a conference there with those of the company's staff who are surveying the tracts in Mexico preparatory to start drilling. He was joined at Fort Worth, Tex., by T. B. Hoffer, who was instrumental in getting the land leased and is largely interested in its development.

* * *

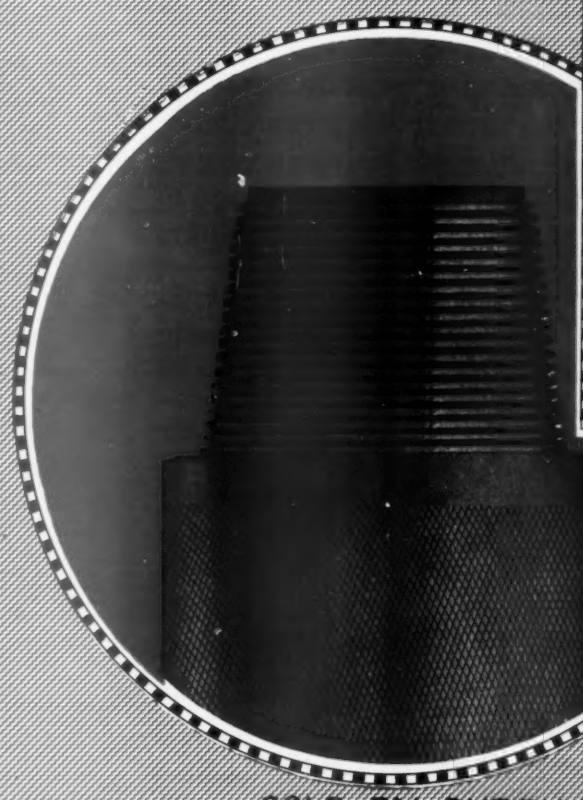
Paul B. Whitney of Denver, geologist for the Sinclair interests in the Rocky Mountain region, was in Casper, Wyo., recently. Mr. Whitney returned recently from New Zealand where he was engaged in geological work for an English syndicate in New Zealand and Australia and was associated with F. G. Clapp and Ernest Marquardt. He believes New Zealand will be an important factor in the production of crude petroleum. Mr. Whitney was instrumental in persuading the Sinclair interests to prospect the Parallel Dome at Boulder, Colo., where there is a showing for a new light oil field.

* * *

Charles V. Witt, president of the new Superior Steel Pipe Company, Pittsburgh, Pa., is a mechanical engineer, and received his degree at the University of Dresden, Germany. He spent some time abroad on underground piping systems for transmission of steam, and came to America in 1901. His first connection here was with the Carnegie Steel Company. L. R. Foust, vice president, is a graduate of the Carnegie Institute of Technology, college of engineering. After several years operating experience with one of Pittsburgh's large steel companies, he was employed by the Bell Telephone Company of Pennsylvania in construction work until the war, during which he served with the American Expeditionary Forces in France; and then entered the employ of the Jones & Laughlin Steel Corporation's Southside Pittsburgh plant.

XUM

"They cost you no more but do Last Longer"



Every time you make-up or break-out a

HUGHES TOOLJOINT

you have a greater realization of its

Superior Performance

SOLD BY SUPPLY STORES EVERYWHERE

HUGHES TOOL COMPANY

Branch Plants
Los Angeles, Calif.
Oklahoma City, Okla.

MAIN OFFICE AND PLANT
HOUSTON, TEXAS

Export Office
New York City, N.Y.

Detailed Operations in All Fields for Month of June

SUMMARY OF ALL FIELDS

Summary of Wells Completed

Field—	Comp.	Prod.	Dry	Gas
Eastern	426	1,763	41	55
Central Ohio	41	172	11	27
Lima	61	708	6	2
Indiana	16	247	8	1
Illinois	25	841	8	0
Kentucky	148	2,506	32	6
Tennessee	1	0	1	0
Kansas	195	16,129	51	6
Oklahoma	490	67,845	142	40
N. Cent. Texas	563	61,951	216	11
E. Cent. Texas	2	1,775	0	0
Gulf Coast	106	23,014	41	2
Southwest Texas	43	7,221	3	11
Arkansas	95	6,038	16	6
N. Louisiana	96	5,962	30	12
Wyoming	37	6,636	6	1
Montana	47	4,839	21	3
Colorado	13	690	6	3
New Mexico	12	195	7	0
Total June	2,417	208,532	646	186
Total May	2,295	231,976	662	174
Difference	122	23,444	16	12

Summary of New Work

Field—	Rigs	Drg.	Ttl.
Eastern	130	503	633
Central Ohio	45	97	142
Lima	2	73	75
Indiana	3	37	40
Illinois	4	44	48
Kentucky	12	172	184
Tennessee	1	19	20
Mississippi	5	9	14
Florida	0	1	1
Alabama	6	4	4
Kansas	112	364	476
Oklahoma	233	1,214	1,447
N. Cent. Texas	314	1,091	1,405
E. Cent. Texas	1	33	34
Gulf Coast	49	204	253
Southwest Texas	41	114	155
Arkansas	61	104	165
North Louisiana	50	129	179
Wyoming	37	348	385
Montana	17	148	165
Colorado	14	101	115
Utah	3	32	35
New Mexico	13	132	145
Total June	1,147	4,973	6,120
Total May	1,125	4,595	5,720
Difference	22	378	400

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. The rigs and wells drilling are set forth in similar manner. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

OKLAHOMA FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Osage	94	13,146	18	5
Tulsa	23	962	13	0
Okmulgee	52	2,623	24	4
Kay	15	3,341	1	3
Pawnee	14	972	3	2
Garfield	29	20,772	1	0
Payne	16	2,590	2	2
Creek	57	3,851	13	1
Lincoln	21	3,673	6	1
Okfuskee	25	2,154	13	4
Muskogee & Waggoner	16	73	9	2
Seminole	20	8,109	2	0
Hughes	11	808	6	0
Grady	12	92	3	6
Stephens and Cotton	21	832	10	3
Pontotoc and Garvin	11	153	6	1
Carter	20	2,727	1	5
Miscellaneous	33	967	11	1
Total June	490	67,845	142	40
Total May	407	57,617	135	39
Difference	83	10,228	7	1

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Osage	28	91	119
Tulsa	1	26	27
Okmulgee	19	76	95
Seminole	16	109	125
Okfuskee	10	55	65
Hughes	6	62	68
Muskogee and Waggoner	5	30	35
Creek	38	124	162
Pawnee	10	50	60
Kay	19	86	105
Payne	6	51	57
Lincoln	6	46	52
Noble	..	23	23
Grant	2	13	15
Garfield	13	118	131
Grady	8	23	31
Comanche	1	20	21
Pontotoc and Garvin	5	13	18
Stephens and Cotton	8	36	44
Jefferson	3	13	16
Carter	15	74	89
Miscellaneous	14	75	89
Total June	233	1,214	1,447
Total May	248	1,227	1,475
Difference	15	13	28

OSAGE COUNTY
WELLS COMPLETED

15-29-10 **Keener O. & G. Co.** 12 25
21-29-11 **Kansas & Oklahoma Cons.** 15 15
35-29-11 **Osage Dev. Co.** 39 70
31-28-11 **C. O. Ross** 1 ..... dry
12-27-5e **Phillips Pet.** 1 125
7-27-6e **Phillips Pet.** 1 100
Phillips Pet. 3 120
Phillips Pet. 13 250
1-27-7e **Tidal Osage Oil** 2 20
8-27-11 **Owen Osage Oil** 365 ..... gas
20-26-6e **Carter Oil** 10 177
Phillips Pet. 15 125
21-26-6e **Phillips Pet.** 13 275
Phillips Pet. 14 300
Phillips Pet. 15 200
Lewis Oil 2 125
29-25-8e **Lewis Oil** 9 125
31-25-8e **A. G. Oliphant et al** 2 ..... dry
24-24-8e **Tidal Oil** 6 15
25-23-10 **Ross & Wetherill** 13 25
36-22-8e **Mid-Kansas Oil** 1 10
23-22-10 **Elm Oil** 14 20
10-21-10 **Mid-Kansas Oil** 1 17
27-21-10 **Devonian & Tidal** 2 4
17-21-12 **Kewanee O. & G.** 5 1
31-21-12 **Grimes & Elliott** 9 20
3-20-11 **Grimes & Elliott** 1 ..... dry
31-20-11 **Sand Springs Home** 94 ..... dry
22-20-12 **Savoy Oil** 8 ..... dry
29-20-12 **Winona Oil** 5 25
Winona Oil 6 275
36-28-11 **A. D. Simon** 7 8
12-27-5e **Phillips Pet.** 3 100
Phillips Pet. 16 2600
7-27-6e **Phillips Pet.** 4 100
20-26-6e **Phillips Pet.** 16 375
21-26-6e **Phillips Pet.** 16 250
22-26-6e **Mid-Kansas Oil** 2 20
Mid-Kansas Oil 4 ..... dry
29-25-8e **The Texas Co.** 1 ..... dry
29-25-12 **Titus et al** 1 ..... gas
26-24-8e **Carter Oil** 3 ..... dry
35-22-8e **Skelly-Moore** 1 20
18-22-10 **Mid-Co Pet.** 15 50
33-22-10 **Tidal Osage Oil** 25 15
5-22-11 **Kewanee O. & G.** 13 15
19-21-10 **Swoverland et al** 3 ..... dry
22-21-12 **Commercial Drlg. Co.** 2 10
30-21-12 **Elliott & Smith** 23 800
31-21-12 **Gillespie & Grimes** 8 75
29-20-10 **Breene & Holm** 1 ..... dry
33-20-11 **Sand Springs Home** 1 ..... dry
28-20-12 **Continental Oil** 15 185
15-29-10 **Keener O. & G.** 11 50
15-29-11 **A. W. Brown** 11 10
1-27-5e **Phillips Pet.** 13 480
7-27-6e **Phillips Pet.** 2 250
Phillips Pet. 4 997
22-26-6e **Mid-Kansas O. & G.** 1 65
28-25-6e **Phillips Pet.** 3 400
19-25-8e **A. G. Oliphant** 1 35
34-25-11 **Devonian Oil** 15 50
20-24-9e **Tidal Oil** 3 100
32-24-9e **Peters Pet.** 5 15
28-24-10 **Western American Oil** 10 1
1-24-11 **Plymouth Pet.** 1 ..... dry
10-21-10 **Mid-Kansas O. & G.** 2 50
11-21-10 **Mid-Kansas O. & G.** 7 25
33-21-10 **T. K. Smith** 1 ..... dry
30-21-12 **Elliott & Smith** 24 63
13-20-10 **L. C. Hivick** 1 ..... dry
21-25-6e **Prairie O. & G.** 7 110
Prairie O. & G. 6 100
15-29-10 **Keener O. & G.** 13 20
Keener O. & G. 14 20
1-27-5e **Phillips Pet.** 16 ..... dry
2-27-5e **Phillips Pet.** 4 ..... dry
Skelly Oil 1 938
11-27-10 **Pure Oil** 87 50
8-27-11 **Osage Prod. Co.** 366 ..... gas
36-27-11 **Tyrone Oil** 7 30
21-26-6e **Lewis Oil** 3 125
Lewis Oil 4 400
22-26-6e **Mid-Kansas Oil** 3 35
30-25-8e **Lewis Oil** 1 250
6-24-8e **Osage Oil** 1 1200
12-23-8e **Peters Pet.** 9 50
16-22-9e **Amerada Pet.** 20 100
34-22-9e **Moore et al** 1 ..... dry
4-22-11 **Kewanee O. & G.** 3 10
2-21-10 **Oklahoma Nat. Gas Co.** 712 ..... gas
18-21-10 **Cohen & Bozo** 1 ..... dry
24-20-10 **Sand Springs Home** 1 ..... gas
5-20-11 **Pioneer Pet.** 7 30
Wells completed 94
Production 13,146
Dry 18
Gas 5
Gas production 13,050,000

TULSA COUNTY

23-19-10 **Boles, Prairie O. & G.** 1 420
Postoak, Red Bank Oil 2 75
29-19-12 **Postoak, Gladys Belle Oil** 3 25
34-19-12 **Drew, Suppees et al** 1-A ..... dry
34-18-14 **Truster, Dedman et al** 1 ..... dry
15-19-10 **Beaver, Crown Central Pet.** 1 ..... dry
23-19-10 **Postoak, Red Bank Oil** 1 ..... dry
23-19-10 **Hickory, Twin State Oil** 1 50
35-19-12 **Narasky, S. E. Benson** 8 30
9-19-14 **Herrod, Thermal O. & G.** 1-A ..... dry
18-18-14 **Burgess, Edwards et al** 1 ..... dry
30-22-14 **Lane, Sanders O. & G.** 5 12
29-21-13 **Turner, Chas. B. Creekmore** 8 ..... dry
Turner, Chas. B. Creekmore 9 5
14-19-10 **Robinson, Holmes et al** 3 ..... dry
4-19-12 **Strip, J. C. King** 1 ..... dry
9-17-14 **Perryman, H. & N. Oil** 2 ..... dry
12-16-13 **Cooper, W. O. Dickson** 2 ..... dry
4-19-10 **Tuckobotche, Gleddon Oil** 1 30
23-19-10 **Unallotted, W. E. Brown Oil** 2 300
22-17-13 **Bruner, Franchott et al** 7 15
36-17-13 **Montgomery, Newbrough & Hazen** 2 ..... dry
6-16-13 **Cawles, Superior Oil** 4 ..... dry
Wells completed 23
Production 962
Dry 13

OKMULGEE COUNTY

27-16-12 **Haskins, Independent O. & G.** 15 100
3-15-11 **Strip, C. F. Noble** 4 20
35-14-11 **Fisher, Crown Central Pet.** 6 20
22-14-12 **Havercamp, T. A. Johnson et al** 5 ..... dry
34-14-12 **Unallotted, G. A. Gifford** 1 ..... dry
25-13-11 **Lewis, J. A. Swindler & Sons** 6 200
31-21-12 **Rentie, Simms Oil** 15 15
17-11-12 **Summers, M. C. French** 4 3
21-15-14 **Osborn, J. L. Selby** 1-A 30
16-14-14 **S. Colbert, F. D. Misener et al** 9 15
15-13-14 **Doyle, Cal Cul Oil** 4 ..... gas
27-13-14 **Hill, A. Shelton** 1 10
19-16-13 **Grant, Leonard Pet.** 3 ..... dry
1-14-11 **Brown, Penrod & Thompson** 1 25
20-14-11 **Sizemore, Evans Day et al** 1 ..... dry
22-14-12 **Huckaby, Sinclair Oil** 1 ..... dry
28-13-11 **Jones, The Texas Co.** 1 ..... gas
7-12-12 **Wilson, Independent O. & G. Co.** 4 ..... dry
17-11-12 **Summers, Decius** 1 ..... dry
7-15-13 **Wisner, Devonian Oil** 13 ..... dry
16-15-14 **Alexander, Jolly & Ogg** 1 525
21-15-14 **Osborne, Jolly & Ogg** 1-A 475
14-14-14 **D. Colbert, T. B. Slick** 1 ..... gas
15-14-14 **W. Colbert, Mechling & Berlin** 1-A ..... dry
16-14-14 **G. Colbert, Oklavania Oil** 7 ..... dry
20-13-13 **Hardridge, M. P. Evans et al** 1 ..... dry
13-11-13 **Canard, B. Morgan** 4 ..... dry
34-16-11 **Lowe, Iron Mtn. Oil** 1 50
24-16-12 **Tiger, Devonian Oil** 6 120
23-15-12 **Burnett, Phillips Pet.** 1 ..... dry
Bumett, Phillips Pet. 2 ..... dry
7-14-11 **Farmer, W. E. Holmes O. & G.** 1 50
22-14-12 **Havercamp, T. A. Johnson et al** 6 170
29-13-11 **Chittim, Wigton & Long** 1-A ..... dry
7-12-12 **Turner, Morton & Co.** 3 150
31-11-12 **Barnett, Wireck & King** 1 ..... dry
19-15-13 **Long, L. R. Page** 1 ..... dry
18-15-14 **Harrison, Elliott & Vensell** 5 15
6-12-14 **Griffen, Kingwood Oil** 5 ..... dry
4-15-11 **Fife, Sheridan Oil** 5 30
29-15-11 **Fee, Getzendamer** 4 65
5-14-11 **McIntosh, J. H. Rebold** 3 500
3-14-12 **Stake, W. C. Newman et al** 1 ..... dry
17-14-12 **Kimble, Kingwood Oil** 1 ..... dry
22-13-12 **Haskins, H. E. Clark** 10 25
32-12-12 **Tunnelly, Galligan & Greenwald** 1-A ..... dry
27-14-13 **Byrd, J. J. Schock et al** 1 ..... dry
1-14-14 **Harris, Arksarben Oil** 11 8
15-13-14 **Doyle, Simms Oil** 15 ..... dry
27-13-14 **Hill, Clarion Oil** 6 2
11-12-13 **Lewis, W. B. Pine** 2 ..... dry
13-11-13 **Davis, Nicholson Corp.** 3 ..... gas
Wells completed 52
Production 2623
Dry 24
Gas 4
Gas production 10,250,000

KAY COUNTY

21-29-1w **Priboth, Comar Oil** 7 2242
Duncan, Comar Oil 12 15
5-28-1w **Orr, Comar Oil** 2 442
17-27-1w **Robinson, Marland Oil** 1-A 42
9-27-1w **Geiger, Blackwell O. & G.** 6 50
19-27-1w **Gaylor, Marland Oil** 1 ..... gas
12-26-2w **North, Marland Oil** 3-A 115
32-25-1w **Hack, Mid Co. Pet.** 1 ..... gas
1-26-2w **Smith "A," Prairie O. & G.** 1 60
29-29-1e **Meyer, Carter Oil** 1 ..... dry
4-27-1w **Case, Polling & Denny** 3 250
8-28-1w **Horne, Comar Oil** 4 66
9-27-1w **Burkholder, The Texas Co.** 2 40
17-27-1w **Jameson, Carter Oil** 3 ..... gas
16-25-2w **School land, Marland Oil** 7 19
Wells completed 15
Production 3341
Dry 1
Gas 3
Gas production 40,300,000

PAWNEE COUNTY

4-22-3e **Miller, Magnolia Pet.** 10 236
21-20-7e **Sublet, Tidal Oil** 10 30
23-20-8e **Van Eman, Selby O. & G.** 5 45
33-23-3e **Miller, Watchorn Oil** 13 230
32-21-8e **Meyers, Adamson C. O. & G.** 3 15
34-21-8e **Widener, Gypsy Oil** 18 48
35-21-8e **Norman, Gypsy Oil** 5 20
33-23-3e **Miller, Watchorn O. & G.** 7 ..... dry
25-21-6e **Morrison, Homa Wood Oil** 1 ..... dry
2-20-6e **Newell, Magnolia Pet.** 1 ..... gas
2-20-7e **Peacock, Enfisco Oil** 1 ..... dry
16-20-8e **Cotton, Prairie O. & G.** 3 40
10-20-8e **McNeal, Prairie O. & G.** 6 308
Wells completed 14
Production 972
Dry 3
Gas 2
Gas production 15,500,000

GARFIELD COUNTY

12-22-4w **Wishard, Mid-Cont. Pet.** 18 102
13-22-4w **School land, Mid-Cont. Pet. & Marland** 62 487
School land, Mid-Cont & Marland 64 380
Walker (North), Sinclair Oil 31 1395
Walker (North), Sinclair Oil 38 405
Walker (North), Sinclair Oil 42 650
18-22-3w **Schroeder, Roxana Pet.** 7 206
Schroeder, Roxana Pet. 8 160
Schroeder, Roxana Pet. 15 707
19-22-3w **Kisner (West), Sinclair Oil** 26 2000
31-22-3w **McLean, Imo Oil** 7 120
18-22-3w **Schroeder, Roxana Pet.** 9-L 2294
Hartley, Sinclair Oil 34 800
19-22-3w **Kisner (East), Sinclair Oil** 8 100
13-22-4w **School land, Mid-Cont. & Marland** 53 400
School land, Mid-Cont. & Marland 59 ..... dry
School land, Mid-Cont. & Marland 68 888
School land, Mid-Cont. & Marland 71 185
Walker (North), Sinclair oil 41 1461
Walker (North), Sinclair Oil 49 1100
36-22-4w **Ed Kisner, Sinclair Oil** 7 50
18-22-3w **Schroeder, Roxana Pet.** 11 183
Schroeder, Roxana Pet. 10-A 132
Schroeder, Roxana Pet. 4-H 1323
Schroeder, Roxana Pet. 7-L 1607
Schroeder, Roxana Pet. 8-L 413
Schroeder, Roxana Pet. 4-T 454
Hartley, Sinclair Oil 30 650
19-22-3w **Kisner (West), Sinclair Oil** 28 2120
Wells completed 29
Production 20,772
Dry 1

PAYNE COUNTY

14-19-5e **Myers, Twin State Oil** 2 40
35-19-5e **Laughlin, Josey Oil** 11 110
23-18-3e **Givens, Shaffer O. & R. Co.** 2 315
27-18-3e **Ethridge, Deep Rock O. & G.** 2 20
24-19-4e **Bolton, Prairie O. & G.** 4 620
23-20-4e **Windstaff, Wentz Oil Corp.** 1 ..... dry
23-18-3e **Haley, Amerada Pet.** 3 ..... gas
Givens, Shaffer O. & R. 3 133
26-18-3e **Liston, Empire G. & F.** 2 400
26-18-4e **Broyles, New England O. & P. L.** 2 185
2-18-5e **Busbee, Josey Oil** 2 ..... dry
23-19-4e **Ellis, Prairie O. & G.** 2 75
23-18-3e **Haley, Amerada Pet.** 3 210
Ostrander, Pure Oil 2 182
Givens, Shaffer O. & R. 4 300
6-17-4e **Kirk, Home Gas** 2 ..... gas
Wells completed 16
Production 2590
Dry 2
Gas 2
Gas production 14,000,000

CREEK COUNTY

5-19-8e **Noble, Bartlett & Mann** 2 60
28-19-8e **Canard, F. R. Billingslea** 1 ..... dry
7-18-7e **Vida-Way, Twin State Oil** 3 6
22-17-8e **Mitchell, Barnsdall Oil** 2 20
22-17-8e **Mitchell, Transcontinental** 1-A 65
27-17-8e **Bigpond, Inter-Ocean & J. W. McCulloch** 3 455
12-14-8e **Bruner, C. G. Tibbens** 9 100
14-18-11 **Unallotted, Slate O. & G.** 11 20
6-18-12 **Sango, Sunray Oil et al** 3 300
Sango Runray Oil et al 5 90
Unallotted, Sunray Oil et al 5 110
11-17-10 **Smith, Ted Lillystrand** 1-A 30
24-17-10 **Dawson, J. H. Wright** 11 40
7-17-11 **McDougal, M. P. Evans** 1 ..... dry
28-16-9e **Scott, Jomack Oil** 4 7
24-15-9e **Edwards, J. W. McCulloch** 1 ..... dry
30-15-9e **Unallotted, C. G. Tibbens** 28 600
12-19-8e **Porter, J. B. Grieves** 1 40
13-19-8e **Ross, Gled Oil** 3 75
Peters, Burlengame & Sharp 6 410
32-18-7e **Derrisaw, Magnolia Pet.** 2 60
27-17-8e **Bruner, Joemack Oil** 1 11
10-17-9e **McMahon, Prairie O. & G.** 1 35
9-19-9e **Ford, Christy & McMahan** 2 ..... dry
3-18-11 **Leader, Gray Oil** 2 100
28-18-11 **Pahcahney, Riverland Oil** 1 ..... dry
3-17-9e **Simmons, The Texas Co.** 1 250
10-17-9e **Bruce, Roxana Pet.** 1 240
24-17-10 **Dawson, J. H. Wright** 8 ..... dry
32-16-9e **Hamilton, Wilcox O. & G.** 7 ..... dry
12-16-11 **Childress, Edgerton et al** 1 10
31-15-9e **Lucas, Skelly Oil** 2 20
7-18-7e **Vance, Magnolia Pet.** 1 62
5-17-8e **Hendrickson, Roxana Pet.** 1 ..... dry
22-17-8e **Johnson, Savoy Oil** 4 60
26-15-8e **Narchubby, Bu-Vi-Bar Pet.** 2 ..... dry
12-14-8e **Brown, T. P. C. & O. Co.** 5 5
13-14-8e **Sewell, C. G. Tibbens** 11 30
30-48-9e **Sherman, H. U. Bartlett** 1-A 25
4-18-10 **Berryhill, Ike Simmons et al** 1 ..... gas
5-18-12 **Sizemore, S. E. Benson** 1 15
5-17-11 **Jackson, Burk Greis** 1-A ..... dry
10-17-11 **Cumsey, Deens et al** 2 10
31-15-9e **Unallotted, Carter Oil** 1 15
5-14-9e **Thompson, C. G. Tibbens** 1 40
5-14-10 **Groom, Evans et al** 1 ..... dry
30-14-10 **Craig, Wood Oil** 2 ..... dry
32-14-10 **Walker, Mid-Cont. Pet.** 5 190
3-17-9e **Hope "A," Prairie O. & G.** 2 50
26-17-8e **School land, Kite & Farren** 1 10
25-15-8e **Herrod, C. G. Tibbens** 2 5
12-14-8e **Ponds, Haskell Oil** 5 70
4-19-9e **Fulson, Curtis Oil** 1 ..... dry
21-17-9e **Harjoche, T. P. C. & O. Co.** 7 75
30-17-10 **Sneed, Independent O. & G.** 1 15
30-15-9e **Unallotted, C. G. Tibbens** 30 15
Fields, C. G. Tibbens 3 5
Wells completed 57
Production 3851
Dry 13
Gas 1
Gas production 3,000,000

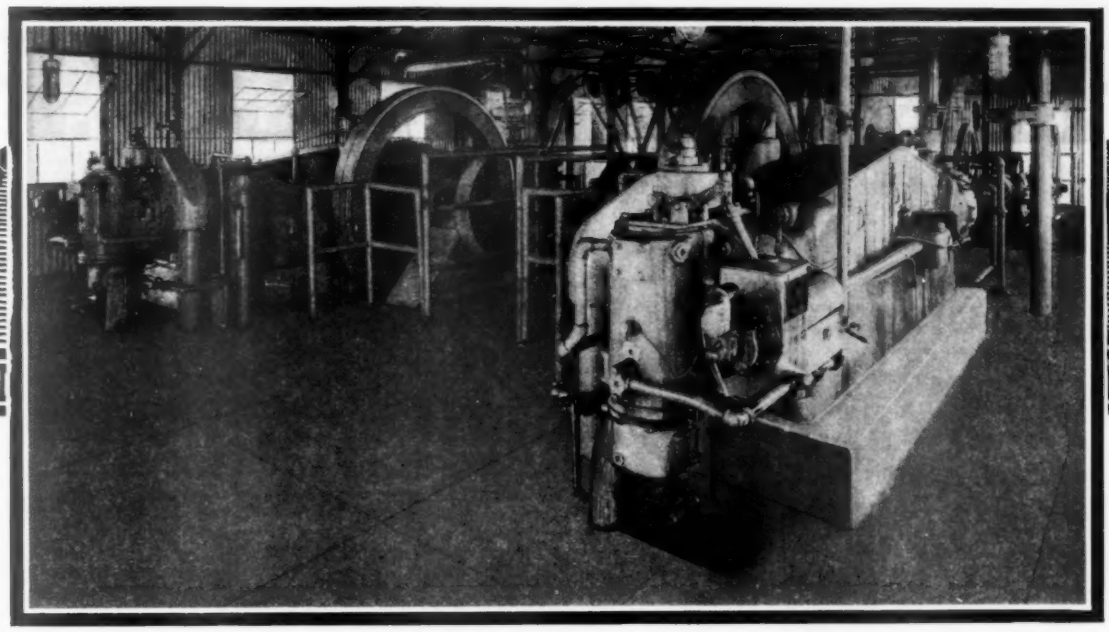
LINCOLN COUNTY

11-14-5e **Caves, Gypsy Oil** 12 410
5-12-3e **Jones, Wilcox O. & G.** 2 ..... dry
34-15-5e **A. E. Sproleder, Magnolia Pet.** 4 75
5-15-6e **Howard, Independent O. & G.** 2 20
8-15-6e **Hopewell, Phillips Pet.** 2 950
1-14-5e **Powers, Sinclair Oil** 1 ..... dry
10-14-5e **Davenport townsite, Magnolia Pet.** 1 ..... dry
10-14-5e **Cage, Prairie O. & G.** 1 ..... dry
3-14-5e **Stout, Prairie O. & G.** 20 25
Stout, Prairie O. & G. 21 ..... gas
8-15-6e **Earp, Mid-Cont. Pet.** 5 1400
Earp, Mid-Cont. Pet. 6 435
3-14-5e **Belless, Magnolia Pet.** 3 50
10-14-5e **Davenport townsite, Magnolia Pet.** 1 ..... dry
22-14-6e **Sac & Fox School land, Wilcox O. & G.** 3 16
34-15-5e **M. & F. Sproleder, Magnolia Pet.** 8 75
35-15-5e **Caves, Gypsy Oil** 10 75
10-14-5e **Patterson, Phillips Pet.** 6 112
11-14-5e **Roberson, The Texas Co.** 1 20
12-13-6e **Reeves, Amerada Pet.** 1 ..... dry
3-14-5e **Stout, Prairie O. & G.** 22 10
Wells completed 21
Production 3673
Dry 6
Gas 1
Gas production 3,500,000

OKFUSKEE COUNTY

10-12-11 **Randall, Barnsdall Oil** 1 350
22-12-11 **Holmes, Hartman & Mann** 1 15
23-11-11 **Lekowskie, Frank Havel** 1 ..... gas
10-12-11 **Randall, Phillips Pet.** 1 641
13-12-11 **Sugar, Independent & Angelo Tex** 1-B ..... dry
Sugar, Independent & Angelo Tex 6 ..... dry
33-12-11 **McCoy, Josey Oil** 1 ..... dry
13-11-11 **Holmes, Independent O. & G.** 15 ..... dry
1-10-11 **Robinson, T. A. Johnson & Umburn** 1 ..... dry
11-13-8e **Taylor, Mal De Mar Oil** 1 ..... dry
18-12-8e **Bear, Dalton & Baker** 1 ..... dry
15-12-11 **Hill, Independent O. & G.** 2-A ..... dry
2-10-12 **Goober, W. C. Newman** 1 ..... dry
7-10-12 **Birdcreek, Guy Fisher & Carter Oil** 2 ..... dry
10-12-11 **Randall, Barnsdall Oil** 2 680
13-12-11 **Canard, Central Natl. Oil** 3 8
13-12-11 **Sugar, Independent & Anglo-Tex** 11-A ..... dry
Harjo, Amerada Pet. 13 ..... dry
Looney, J. K. Leard et al 3 ..... dry
33-12-11 **McCoy, Josey Oil** 14 350
Fields, Josey Oil 4 60
25-11-9e **Foster, Independent O. & G.** 1 ..... gas
22-11-11 **Grayson, Champlin Refg. Co.** 7 50
15-10-9e **Bruner, Burke-Greis** 1 ..... gas
17-10-9e **Walker, Minnehoma Oil** 1 ..... gas
Wells completed 25
Production 2154
Dry 13
Gas 4
Gas production 143,160,000

(Continued on Page 155)



Your *Head* or your *Heart*—which do you use when you buy a Gas Engine?

One type of buyer asks how much fuel does a Cooper engine use? How many cubic feet of gas will it pump? What is the lubricating oil consumption? What is the yearly repair cost? What percentage of operating hours do you get? How long does it take to adjust a crank pin box?

He is the type of buyer who has specified Cooper engines and compressors for years because Cooper engines were originally designed to surpass when measured with such standards.

The other type of buyer asks can Fred Thomas or Fletch Devin from Mt. Vernon; Fred Hudgins from Tulsa; Art Burrell from Dallas, or Jim Reed from Los Angeles come over tomorrow? I want to talk about some gas engines and compressors.

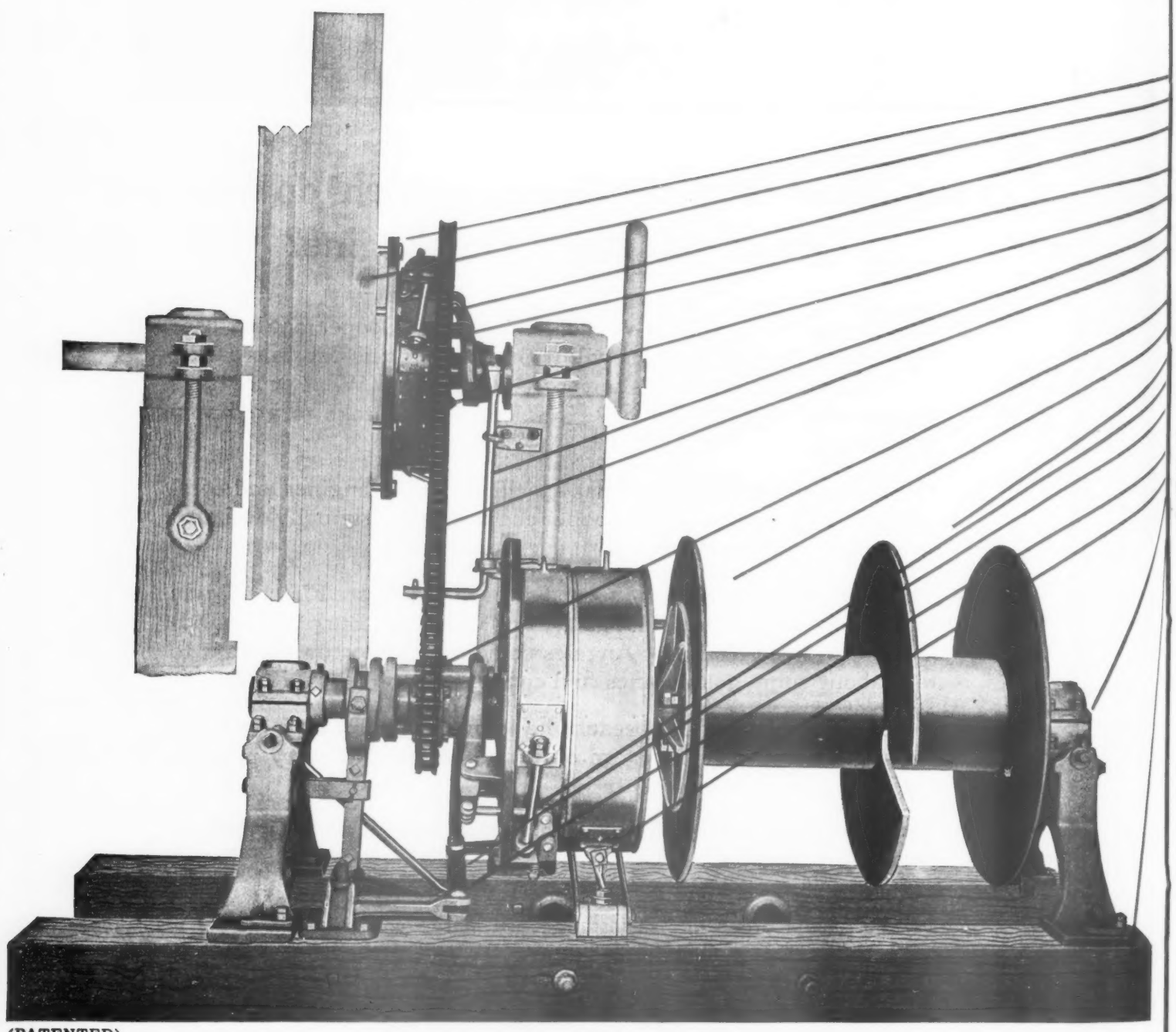
He buys Cooper engines because he knows the man he buys them from and holds in high regard every statement and every promise made by a Cooper representative.

Cooper engines are satisfying men of both types in every oil and gas field of the country.

The American Petroleum Company has installed two more Coopers shown in the plant above.

THE C. & G. COOPER CO.
MT. VERNON, OHIO
1605 Kirby Bldg., Dallas—504 Kennedy Bldg., Tulsa
317 Bank of Italy Bldg., Los Angeles

THE IMPROVED



(PATENTED)

MODEL 27

S. & B. Chain Driven Sand Reel

MODEL 27

Fits Any Rig Without Alteration

ONE HUNDRED LESS PARTS

Two Piece Driving Flange fits over Regular Rig Iron Flange.

Two Piece Bandwheel Friction Clutch requires 10½" of Shaft space, entirely removable.

Single Adjusting Bolt to compensate for wear.

Flange Keys may be driven without removing parts.

All breakable Brackets and Levers of Steel.

Diamond Roller Chain for silence, speed and strength.

Machine Cut Steel Sprocket.

Capacity 7,000 feet of 9/16" Line.

Capacity 3,500 feet of 9/16" Line.

Single Adjusting Bolt for Clutch.

Single Control Lever for operating Clutch and Brake.

Connection for Safety Line.

Single Adjusting Bolt for Brake.

Heavy Adjustable Bearings.

Oak Sills, Resilient, Universally Applicable, Portable—Steel Optional.

At Supply Stores Everywhere

POPULARITY

The popularity of the improved S. & B. Chain Driven Sand Reel has spread throughout the oil industry almost over night.

Its simplified design . . . its greater efficiency . . . sturdy construction . . . adaptability to any rig without alteration . . . have won instant favor with the oil fraternity.

It has all the advantages of other types with many features not found on any other sand reel.

Write for illustrated bulletin.

Manufactured by

THE OIL COUNTRY SPECIALTIES MFG. CO.

COFFEYVILLE, KANSAS

Geological Study of Creek County

Origin and Interpretation of Structural Features of Northeastern Oklahoma and Future Oil Possibilities

By J. W. Merritt and O. G. McDonald

This is the concluding article of the series, previous articles being published in the issues of The Oil and Gas Journal for July 1, July 8 and July 15.

As mentioned by Thom[25] in his remarks upon Foley's paper, there are a number of thrust faults in the region just north of the Ouachita Mountains. These strike in a direction slightly north of east, and about at right angles with the direction of the Ouachita thrust, and are due directly to that movement. They are accompanied by numerous normal faults which probably largely followed the active thrusting action and are due to relaxation and readjustment.

Absence of Faults in Kansas

As previously stated, it is to be noted that the faults which follow northeast-southwest direction are more common in the southern part of the northeastern Oklahoma area. The northwest-southeast faults, however, persist in great numbers until the Kansas line is reached, when they die out rather rapidly, though perhaps less data is available in a large way for southern Kansas. The small fields, however, which take the form of "noses" in Seminole, Lincoln, Okmulgee, Creek and Tulsa Counties, increase in structural prominence and a greater percentage of them are closed into dome-form as Osage County is reached. The structural relief of the small anticlines which is very prominent in Osage County gradually dies out in Kansas. This change in structural character as one progresses northward is probably due largely to three things: (1) decrease in thrusting effect as one proceeds away from the region of the origin of that force, causing diminution in the amount of the resultant shear in the crystallines and its effect upon the overlying sediments, tending to cause decrease in both folding and faulting northward; (2) thinning of the sedimentary overburden northward, causing the surface rocks in Osage County, for instance, to be nearer the crystalline shear zones than in Creek or Okfuskee Counties so that the structure at the surface in Creek County would more nearly be correlated with sub-surface structures in the counties southward and thus have more relief than the surface structures in the latter counties; and (3) change northward in the character of the sediments, thus bringing about a different result from the same submerged forces when acting upon those sediments.

Kansas Shale and Lime

In the Kansas area, there is more true shale and fewer sandstones, and more limestones than in northern Oklahoma. The shales of the northern Oklahoma area, especially in the group of counties in which the en echelon faults predominate, are most frequently apt to be of a sandy character. It is to be noted also that the en echelon type of faults disappears both eastward and westward where, largely, more limestones and true shales appear as also northward into Kansas. Sandstones and sandy shales readjust themselves by breaking rather than by folding. Clay shales fold rather than break. Limestones, allowing for the time element, (though brittle to sudden shocks) easily fold by recrystallization of the calcite particles and gliding of the crystals. Such folding is, however, very difficult to obtain by placing sandstones under stress. Thus, it is to be seen that northward into Kansas, where clay shales and limestones prevail, the pressure component of the rotational stresses is taken care of, as elsewhere, by folding, while the tension component is also taken care of by folding because the rocks are less apt to fault than the sandstones and sandy shales of northern Oklahoma. Further evidences of the effect of the forces on the more brittle rocks of the sandstone area of northern Oklahoma is the thrust fault in northern Creek County which would have taken the form of a compression fold had it been in the clay shale-limestone area.

[25]Thom, W. T., Jr., Bull. Am. Assoc. Pet. Geol., Vol. 10, p. 301, 1926.

Theories Concluded

In the preceding paragraphs, numerous theories advanced to explain the origin of the various types of deformation in the northern Mid-Continent area have been described and discussed. While here, as elsewhere, no single theory will suffice to explain the sum total of the whole structural problem, the theories of differential settling or compaction, folding by vertical thrust, warping of sediments accompanied by faulting during deposition, and direct tangential compression all fall far short of solving the complete problem. On the other hand, as developed in the foregoing arguments, rotational stress transmitted to sediments by shearing in the underlying crystalline rocks, may be invoked to explain the origin of all forms of deformation in Creek County and the adjacent territory. The authors, by no means, declare that other forces are not present to a sufficient extent somewhat to modify some of the deformation features of this region, but that such forces are not necessary to explain the types of deformation found here. The rotational stress theory is not a purely hypothetical assumption applied to this region, but the work of such stresses has been noted by the writers in many other parts of the country. Too frequently the student thinks only of metamorphic areas when considering problems of shear and rotational stress. Some of the following examples outside of the Mid-Continent area show effects of rotational stress in areas of slight deformation, or in areas in which the sediments are not metamorphosed; en echelon anticlines in the Los Angeles basin of southern California[26]; en echelon structures in the plains area of central eastern Colorado, where as also in California both the major fault and the secondary en echelon faults and folds[27] are clearly seen and their relationships marked; en echelon structures in the plains area of southern New Mexico[28] where en echelon folds and faults were mapped over a considerable distance.

Future Development

Oil in Creek County, as elsewhere, usually occurs in porous sandstone or limestone beds accompanied by salt water. In such cases oil accumulation is found logically in traps formed by anticlines, lenses and in monoclines where frictional resistance caused by sudden change in dip retards movement, and in dipping beds cut off on upward edges by faults which place impervious sediments in contact with upper edges of porous oil-bearing beds. Where salt water is absent in quantity, as in one sand particularly in southern Creek County, oil accumulates by gravity in the synclines.

[26]Ferguson, R. N., and Willis, C. G., Dynamics of Oil Field Structure in Southern California, Bull. Am. Assoc. Pet. Geol., Vol. 8, pp. 576-583, 1924.

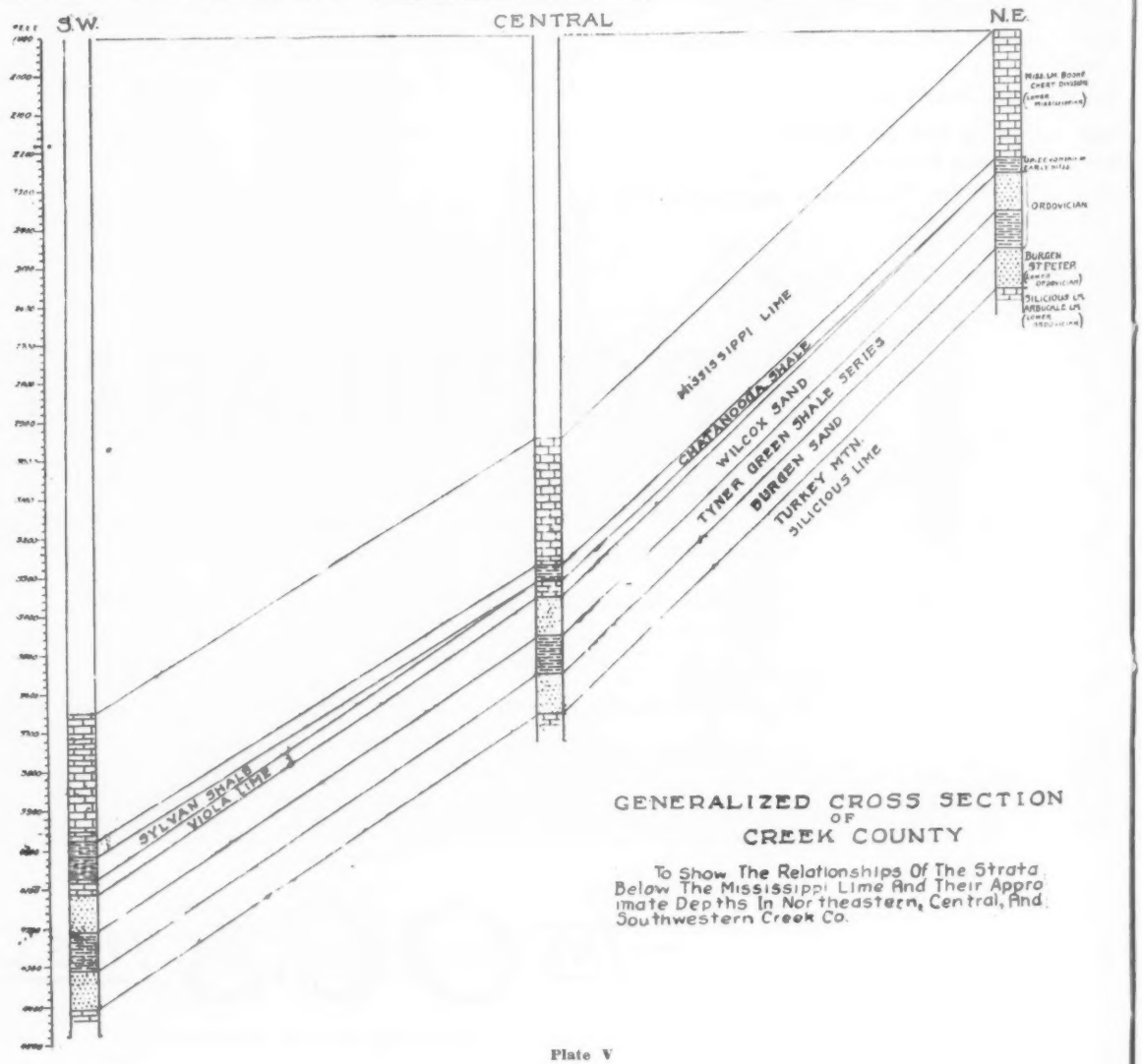
[27]Merritt, J. W., confidential unpublished report, 1924.

[28]Merritt, J. W., and McDonald, O. G., unpublished confidential report, 1925.

Structural Interpretation Important

As set forth in the opening paragraph, there are doubtless in Creek County a large number of favorable structures which, because of the masking effect of vegetation, absence of outcrops or presence of imperfect or confusing outcrops, are yet undiscovered. Since a large proportion of the structures found and tested have proved to be prolific sources of oil and gas, no remaining favorable structure should be left undrilled. If the structural interpretations brought out in the foregoing portions of this work are to have a practical value, they should aid in the search for undiscovered structures in this county and the adjacent areas.

According to the theory of rotational stress set forth above, the greatest deformation in this area will be in the sediments immediately overlying the shear zones in the basement rocks. The locus of the shear zones may be found by locating zones of en echelon faulting and folding. Since such shear zones may be expected to follow straight lines, one may extend his work logically from either end of a fault or fold zone in the line of that zone with a fair expectation of finding other faults and folds by more careful work. The best structures, likewise, are



GENERALIZED CROSS SECTION OF CREEK COUNTY

To Show The Relationships Of The Strata Below The Mississippi Lime And Their Approximate Depths In Northeastern, Central, And Southwestern Creek Co.

Plate V

On the Givens Farm

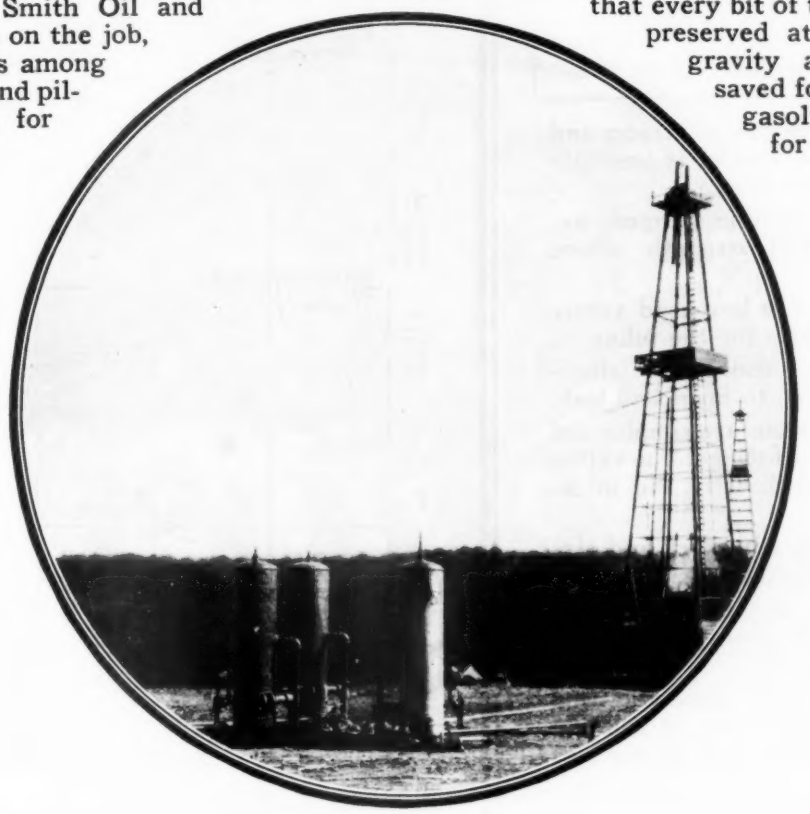
The Shaffer Oil & Refining Company, Givens farm production, Mehan Pool, is handled through Smith Oil and Gas Separators.

This is only one of many Smith Separator installations you will find handling the separation of oil and gas in this field.

In fact, go into any field, anywhere, and you will find Smith Oil and Gas Separators on the job, winning friends among the producers and piling up profits for them.

There's a sound reason for their popularity . . . a reason any of the larger producers can demonstrate in the form of figures that tell an interesting profit-making story.

Put a Smith Oil and Gas Separator on your next well. Follow the lead of those who now set Smith Separators ahead of production that every bit of the oil may be preserved at casing head gravity and the gas saved for fuel, for the gasoline plant or for the pipe line.



If it's worth drilling for it's worth saving

Write for our new catalog.

SMITH SEPARATOR COMPANY

Tulsa *Okla.*

NEW YORK OFFICE—Export Representative:
Oil Field Equipment Co., 30 Church St., New York
Cable Address: "Oilfield" N. Y.

CALIFORNIA OFFICE:
2039 East 38th Street, Los Angeles, California

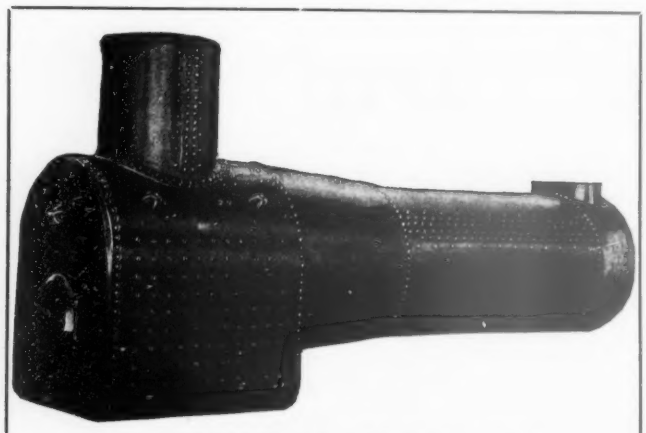
LONDON OFFICE:
Perkins MacIntosh Petroleum Tool & Boring Co., Ltd.,
25 Bishopsgate
Cable Address: "Oleborers" London

TEXAS OFFICES:
507 State National Bank Building, Houston, Texas
Fort Worth, Texas

DONOVAN BOILERS ARE CONSISTENTLY GOOD

FIRST CHOICE OF THE MEN WHO USE BOILERS

THEIR QUALITY IS APPARENT



Donovan—A.S.M.E. Code—Oil Country Boiler

The large dome over the fire box is strong and assures a large supply of dry steam. It prevents pulling over and cracking the flange.

The one-piece mud ring, machine flanged, assures uniform thickness and strength where needed.

The small tube holes in the fire box head assure a driving fit and longer service for the tubes.

The new flanged and welded door frame eliminates seams, and is less likely to burn and leak.

The new safety valve connections are simpler and neater. They eliminate a lot of fittings. The valves connect into the dome head directly. No intervening fittings required.

Hand hole plates are of ample number and size and so spaced as to facilitate cleaning.

The workmanship and finish are high grade, the external evidence of inherent quality. See it for yourself.

Look over a DONOVAN the next time you need a boiler. If you are not already a user, it will pay you to try a DONOVAN. They are as good as they look.

Manufactured by

DONOVAN BOILER WORKS, Inc.
Parkersburg, W. Va.
NEW YORK OFFICE
30 Church Street

FRICK-REID SUPPLY COMPANY
Mid-Continent Distributors

GREAT NORTHERN TOOL & SUPPLY CO.
MIDLAND IRON WORKS
Montana Distributors

All Leading Supply Houses Throughout the Eastern Fields handle

DONOVAN QUALITY PRODUCTS

Always Dependable

found in the zones of faulting. Therefore, in an area of known faults where anticlines have not been mapped, careful search should be made for structures which must surely be present.

Structures Evaluated

Relative merits of different structures. Sand conditions being equal, the dome, or closed anticline is the best type of structure for oil and gas accumulation (except in the single case of synclines where water is absent). The anticlines in Creek County whose axes lie northeast-southwest (the en echelon type of fold) are more apt to take a closed form, especially in the lower horizons, than anticlines with other axial arrangements. Large folds and terraces in Creek County, related probably to vertical movements in the basement rocks along or adjacent to shear zones, have probably all been discovered and may be ignored in this discussion as far as future exploitation is concerned. The en echelon anticlines usually increase in amount of folding with depth. This makes them the more valuable for possibilities in the lower producing horizons.

Anticlines with northwest-southeast axes are less apt to be closed in form because they are related more often to faulting or to slumping over or adjacent to faults. Since, in Creek County, the direction of the normal dip is rather close to the strike direction of the en echelon faults, anticlines related to these faults in the manner above tend to take the form of plunging anticlines which rarely are closed even by means of fault cut-off. While these produce, they are less apt to be prolific than the type mentioned in the preceding paragraph.

Locating Tests

In drilling the en echelon type (compression) fold the operator should take into account the tendency for these anticlines to have plunging axial planes. Since this plunge in Creek County takes a northwestward direction, the location of a test well on such a structure should be made sufficiently northwest of the surface axis to reach the lowest horizon to be tested upon the axis in that horizon, and not too far down the dip to cause failure in the upper horizons.

Oil and Gas Development.

In developing the producing oil and gas fields of Creek County the following horizons have been found of chief importance, named from top downward: Musselman, Layton, Jones, Cleveland, Wheeler (Oswego lime), Prue, Skinner, Red Fork, Bartlesville, Taneha (Tucker, Booch), Dutcher, Misener, Wilcox, and Turkey Mountain, Sliceous lime). For distribution, thickness and intervals of the most important sands, the reader is referred to the cross sections, plates 1, 2, 4, 5 and Figure 7. There are other producing sands in this county, but, generally, they are not named and are not of great importance. Frequently such sands, because they are unnamed and local in distribution, are merely called "stray" sands.

Description of Producing Sands

The Musselman sand, which has been found productive of gas in the Cushing pool, occurs there at about 700 feet and attains a thickness of about 25 feet.

The Layton sand is productive of oil and gas principally in the northern part of the Cushing field, but also in the area between Drumright and Bristow and in another area a few miles south of Shamrock. It ranges in thickness from 20 to 100 feet, with an average of about 50 feet. Some places it is absent. It underlies a hard limestone 10 to 20 feet thick, sometimes called the Layton lime. This lime sometimes contains gas. The sand is coarse-grained, comparatively soft, porous, and fairly uniform in texture and porosity. It occurs at depths ranging from 1,200 to 1,500 feet, depending upon the locality. Saturation within the sand is incomplete and irregular, due to cross bedding and other irregularities in sedimentation. Layton oils are usually of high gravity. In the Cushing field the Layton ranks highest in gravity, with Bartlesville next and Wheeler last. An excellent description of this sand, as well as the other principal sands of the Cushing Field is to be found in Beal's[20] paper on that field.

The Jones sand, which produces gas at about 1,730 feet in the Cushing area, is relatively unimportant in Creek County. It attains a thickness, where productive, of about 25 feet.

The Cleveland sand also is of relatively no importance in Creek County. Its average thickness is less than that of the Jones sand. It occurs on the Cushing structure at about 1,920 feet

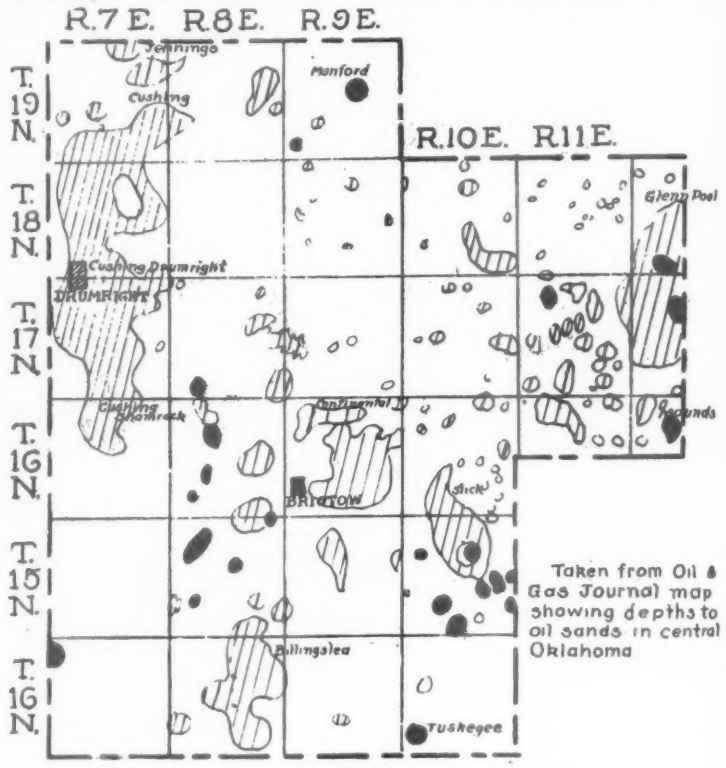
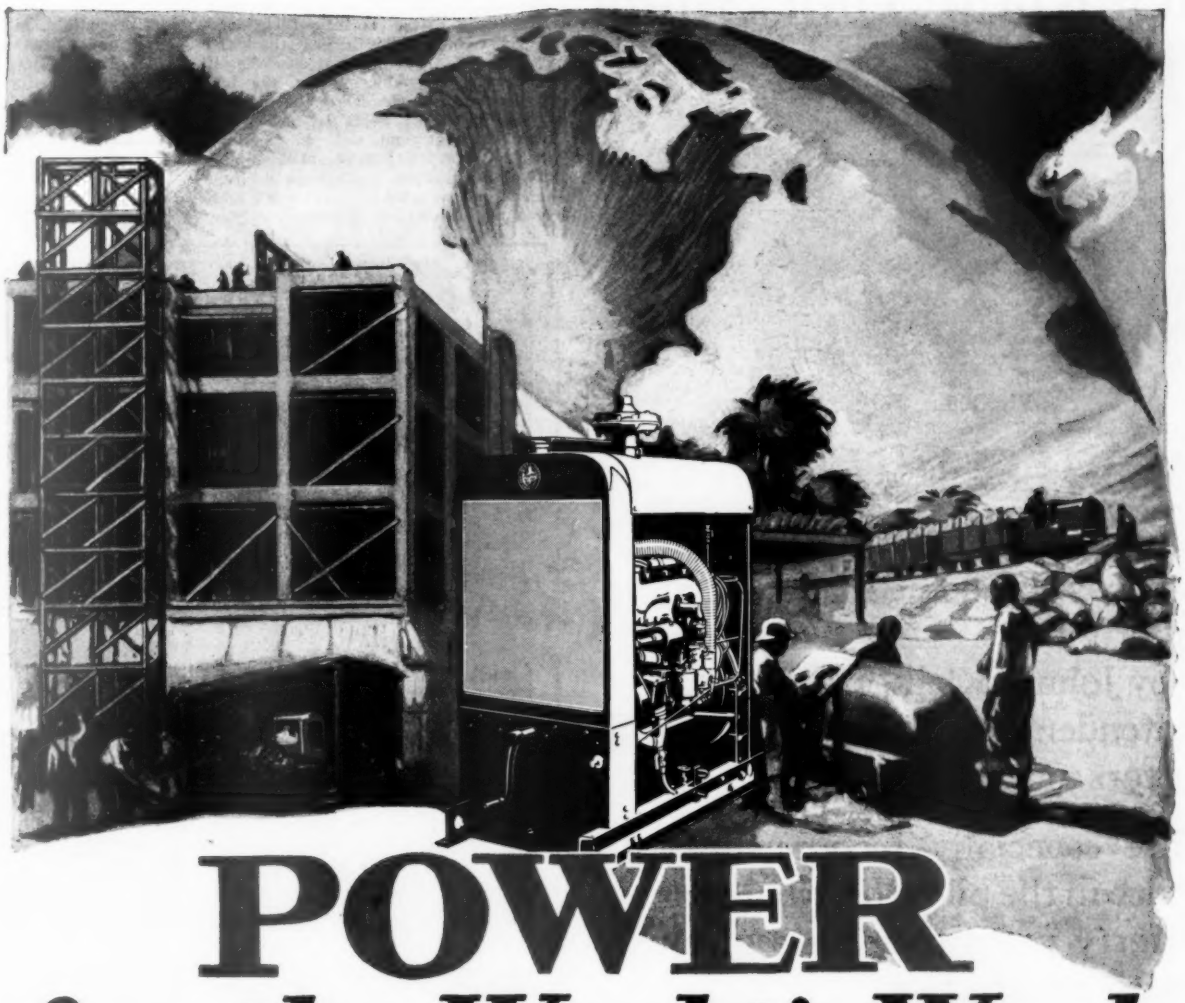


Plate IV

Map of Creek County showing oil pools. Shaded areas—Production above the Mississippi lime. Solid areas—Production below the Mississippi lime.

[20] Beal, Carl H., Geologic Structure in the Cushing Oil and Gas Field, Oklahoma, and Its Relation to the Oil, Gas and Water. U. S. Geological Survey Bull. 658, 1917.



POWER
for the World's Work

All over the globe, whether in American construction programs or in industrial developments at the earth's far corners, power is a mighty force in the World's Work.

In this vast field of industry, Continental Motors are furnishing dependable power at a minimum cost for thousands of varied activities. This dependability and this economy of operation, even under the most adverse conditions, are due to Continental's knowledge of motor building for industrial uses.

CONTINENTAL MOTORS CORPORATION
Offices: Detroit, Mich., U. S. A. *Factories:* Detroit and Muskegon
The Largest Exclusive Motor Manufacturer in the World

CONTINENTAL MOTORS — Powerful as the Nation — AMERICA'S STANDARD

Dependable Power for Every Purpose

Continental Motors

"KLEIN"

Oil Men Know That Name

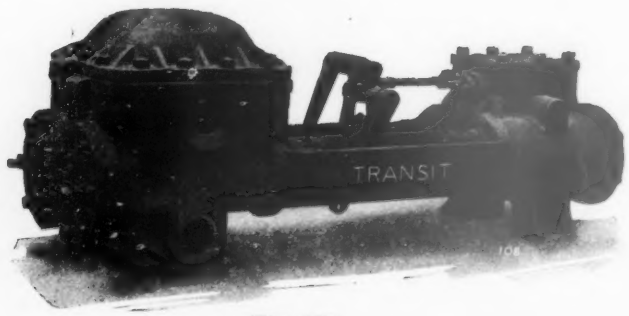


Fig. 108

7½x4x10″ 7½x5x10″ 7½x4½x10″

This pump is still being made just as it was originally, after being designed by John S. Klein, while he was Superintendent of this Company, many years ago.

They are especially recommended for service in the oil fields, where for nearly forty years they have given the utmost satisfaction.

These pumps are simple, compact, rigid and extremely accessible. They are fitted with separate discharge valve plates, liners of either brass tube or removable cast brass, and valves of any standard type to suit conditions.

Descriptive Bulletin No. 102-B on request.

NATIONAL TRANSIT PUMP & MACHINE CO.

OIL CITY, PA.

DISTRICT OFFICES

New York Philadelphia Pittsburgh
Cleveland Houston Tulsa Denver

and contains only small shows of oil and gas.

Wheeler Sand.

The Wheeler sand (correlated with the Oswego lime) is productive chiefly on the Cushing structure. Of the Fort Scott group, composed of an upper limestone, an intermediate shale which sometimes grades into coal, and a lower limestone, the upper limestone member is frequently called the "Big Lime" and the lower member is called the "Oswego Lime." Frequently, especially if one member is found missing, the two have been confused. On the whole, however, the Fort Scott is one of the most persistent and uniform horizons lying above the Mississippi lime and makes an excellent mapping horizon. The lower member, or Oswego lime frequently changes in character from lime to sandy lime or even sandstone. Such is the case where it is called the Wheeler sand. This sand, as also in the case of the Bartlesville and the Layton, is not saturated completely. In its most important producing locality, the Wheeler production covered about 11 square miles for oil and 21 square miles for gas.

The sand attains a thickness of 60 or 70 feet, but with an average thickness considerably less. In the Cushing area the Wheeler "sand" is a coarse-grained, brownish limestone which includes porous or sandy layers that contain the oil. Sometimes the upper limestone member carries gas in paying quantities. In the same area this sand is found at about 2,250 feet depth.

The Prue sand reaches its major importance in Township 14n, Range 8e, where it produces from synclines. Here the sand is found at about 2,390 feet and has an average thickness of about 50 feet

The Skinner sand is productive of oil and gas in relatively small quantity in the Cushing and Glenn pools. At the former locality it is found at about 2,620 feet with a thickness of about 20 feet. In the Glenn pool it occurs at about 1,050 feet.

The Red Fork sand is chiefly important in the eastern and northeastern parts of Creek County where it is found at depths ranging from 1,300 to 1,450 feet. Its thickness ranges from 20 to 60 feet. In this county it is productive mainly in the Red Fork, Sapulpa and Gleen Pool areas.

Bartlesville Sand.

The Bartlesville (Glenn) sand is by far the most uniformly productive sand throughout Creek County, with its chief production coming from the northern half of the county.

This sand is usually brown and grades from fine sandly shale to coarse grained sand. The general appearance of the grains of the Bartlesville sand may be seen from the microphotographs (Pl. 6 E and F). The grains appear to be poorly sorted with a predominance of angular grains and a small percentage of well rounded grains.

The sand attains a thickness sometimes of as much as 200 feet, being thickest in the south central part of the county and thinning out northward and eastward. It is found at about 1,450 feet in the northeast corner of the county, 2,300 feet in the southeast, 2,500 feet in the northwest and 3,170 feet in the southwest. It occurs generally over the whole county, though may be locally missing, sometimes possibly cut out by faulting.

The Bartlesville is found abundantly productive on terraces, anticlines and sometimes on monoclines where lensing or change in porosity causes barriers to form to hold the oil or gas accumulation. The sand is never completely saturated, usually only the upper portion being productive. Sometimes, however, alternate water and oil bearing streaks

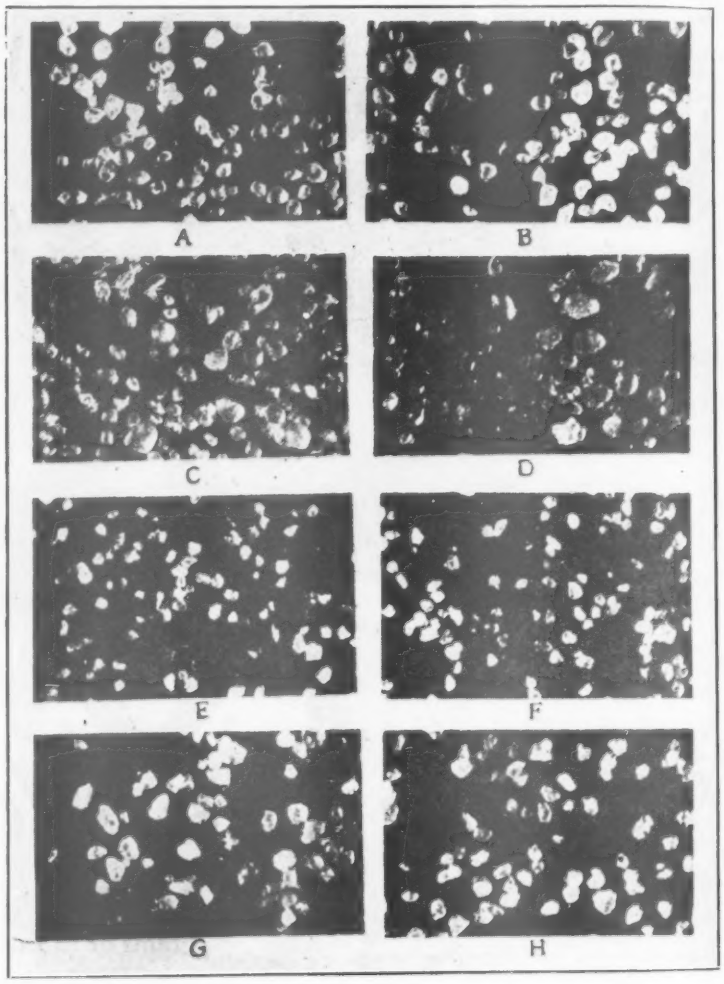
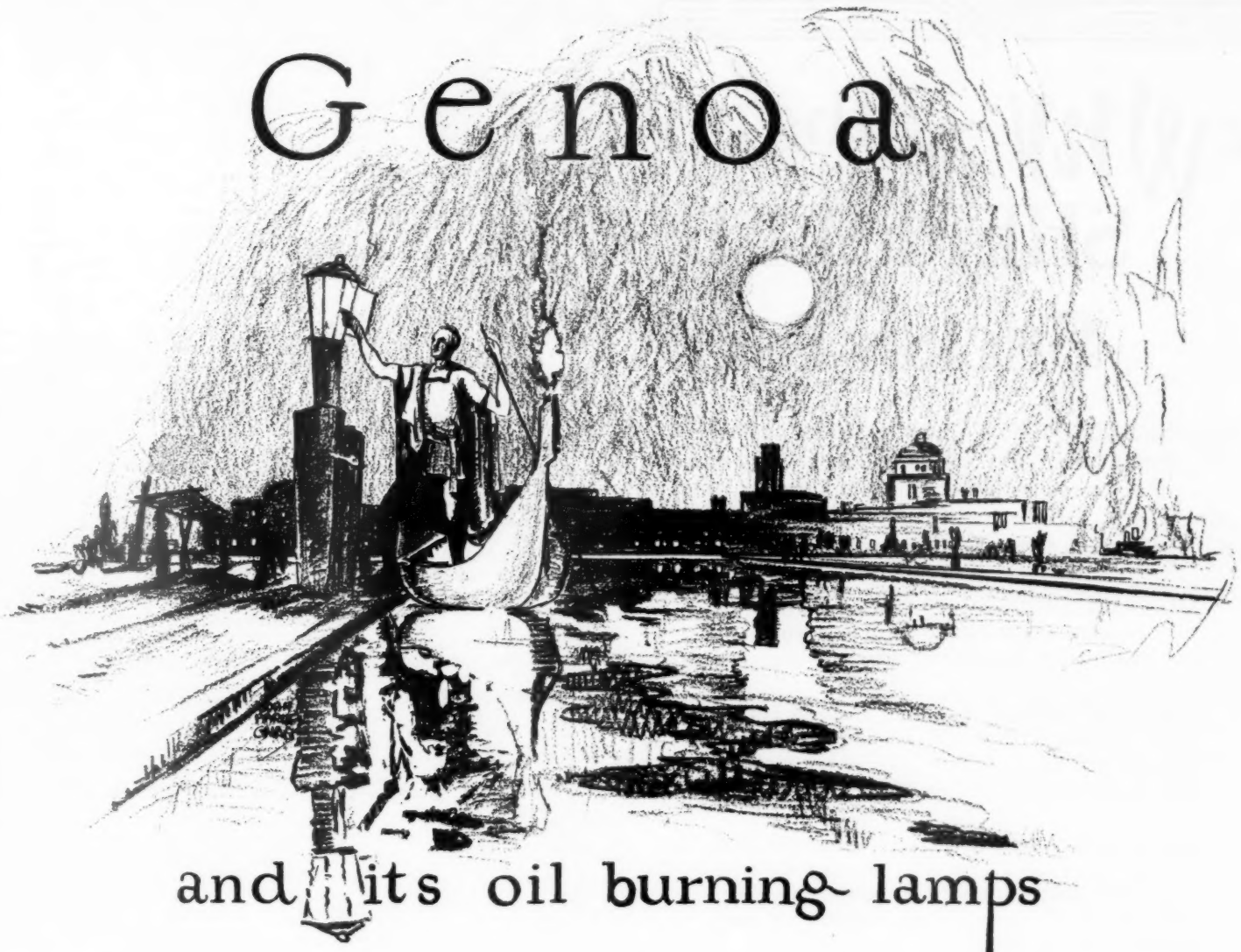


Plate VI

A and B, microphotographs of Wilcox sands. C and D, microphotographs of Hominy sands. E and F, microphotographs of Bartlesville sand. G and H, microphotographs of Elgin sand. Plate after A. G. Trawbridge and M. E. Mortimore, Economic Geology Vol. XX.

Genoa



and its oil burning lamps

Tacitus, Pliny and other writers of Ancient Rome tell us of the oil lamps of Genoa, lighted every evening by the lamplighter-gondolier.

Oil for these lamps was supplied by the wells of Amiano, ancient sources of petroleum supply.

Thus down through the ages has petroleum and its products played its vital part in the advancement of civilization, until today every motorist is coming to learn of the important part played by NATURAL GASOLINE in making a perfect motor fuel.

CHESTNUT & SMITH
CORPORATION
Tulsa, Oklahoma

Why ~ the SHEFFIELD Sucker Rod

SHEFFIELD SUCKER RODS deserve consideration from Oil Producers because actual use under extremely severe duty has proven their superiority. A high quality rod—its use is showing big savings to the Oil Producer.

SHEFFIELD SUCKER RODS are manufactured from a special analysis steel which experience has proven ideal for Sucker Rod manufacture.

THE PERFECTED JOINT on Sheffield Sucker Rods requires a minimum of forging—thereby permitting the joint to retain the strength of the high quality special analysis steel.

MADE COMPLETE by a steel organization with over 40 years of successful steel manufacturing experience. Modern plants and a skilled organization insures the correct manufacture of each Sheffield Sucker Rod.

Sheffield Sucker Rods may be secured from all stores of the *Bovaird Supply Company* and the *International Supply Company* or direct from Kansas City. Made in three sizes: ¾", ⅝" and ⅞" in both Box and Pin and Double Pin Types.

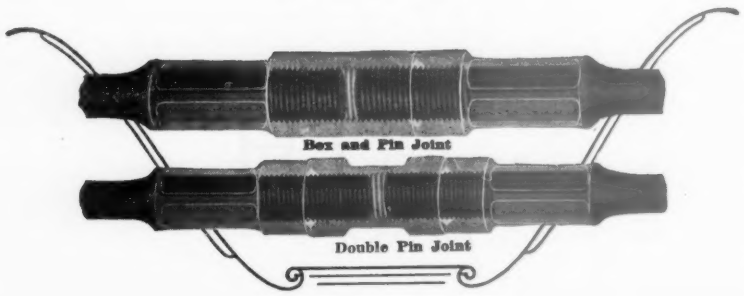
Sheffield Steel Corporation

Successors to

(THE KANSAS CITY BOLT & NUT COMPANY)

Kansas City, Mo.

Manufacturers of New Billet Reinforcing Bars, Rail Steel Reinforcing Bars, Blue Annealed Sheets, Merchant Steel Bars, Merchant Iron Bars, Bolt and Nut Products, Sucker Rods, Pull Rods, Track Spikes, Forgings



occur. Despite irregularities, however, the Bartlesville is well liked by operators because of the staying qualities of the production and the slower initial decline and the great ultimate yield.

The quality of the oil in the Bartlesville is much better than that in the Dutcher, the "Turkey Mountain" and some of the other sands, and is very well liked for refining purposes.

The Taneha (Tucker, Booch) sand occurs at from 1,650 to 1,750 feet depth in the northeast part of the county, 2,500 in the southeast and 2,800 feet in the northwest. It accounts for some fair production of oil and gas in the northern, central and eastern parts of the county. Its thickness ranges from 25 to 50 feet. Its importance is less than that of most of the other sands mentioned in this description.

Dutcher Sand.

The Dutcher sand attains considerable importance in Creek County. Its best productive areas lie in the eastern, central and southeastern parts of the county. This sand thins out from the Bristow area northward and northwestward until it appears to be entirely absent. Almost everywhere encountered this sand yields a showing of oil or gas. It produces from anticlines, terraces and faulted monoclines.

The Dutcher appears to be found in Creek County in two horizons, separated by a shale break. Sometimes the upper, sometimes the lower, and sometimes both are missing in well records. Production may occur in either or both in the same well, and sometimes one will contain oil and the other water, more frequently than not the upper and

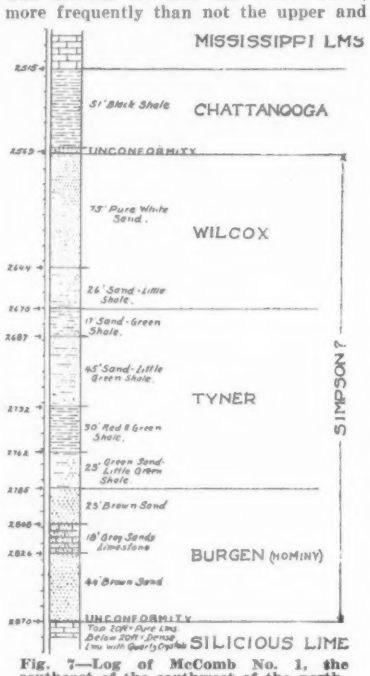


Fig. 7—Log of McComb No. 1, the southeast of the southwest of the northwest of Section 10-17-11. This gives a detailed description of the strata below the Mississippi lime taken from samples collected and identified by Luther White.

lower respectively. The Butcher zone varies in thickness up to over 100 feet. Upon favorable structure this sand has yielded some phenomenal initial production, many wells yielding over 5,000 bbls. and one well on the "Poor Farm" structure southwest of Bristow, over 15,000 bbls. initial. This lenticular character of the Dutcher sands accounts for many dry offsets to good producers. The Dutcher is found at from 1,800 feet in the northeast part of the county to 3,450 feet in the southwest.

The Misener sand has been well described as to distribution and general character elsewhere in this paper. Because of its discontinuous lenticular character, it is thought to be of relatively little potential economic value in Creek County. It correlates with the Mounds sand of Beggs. Its chief occurrence in this county is in Township 15n, Range 10e, and lapping over into the township east.

Wilcox Sand

The Wilcox Sand is an important factor in the oil and gas production of Creek County. This sand ranges in thickness up to 200 feet and over, probably averaging slightly less than 100 feet, and is found at depths ranging from 1,900 feet in the northeast part of the county to 4,000 feet in the southwest corner. It is a pure white sand made up largely of highly angular grains, with some few rounded large etched grains, and more small rounded grains. This sand is difficult to distinguish from the Burgen but is considered a much more uniform fine grained sand. The Wilcox produces chiefly from well defined anticlines, usually domes, and because of this and also because of the fact that the Wilcox is usually much more closely folded than the higher formations, these productive areas are relatively limited in size. This sand has been very prolific in some places, sometimes exceeding 30,000 barrels per acre. The oil is of high gravity and is much sought for because of its good refining qualities. This sand is productive in a belt across the northern part of the county and again in the central and southern parts. (See plate 4.)

The Siliceous Lime ("Turkey Mountain sand"), which is the upper weathered or porous part of the Arbuckle limestone, has been found productive in the northeastern part of Creek County. The production is confined to the upper truncated surface of this limestone body and not to any one horizon in that limsetone. The upper 20 feet consists of pure to sandy dolomitic limestone and below that is a dense dolomitic limestone containing quartz fragments and crystals. Where ever the Arbuckle limestone has been entirely drilled through in this region the drill has passed into granite. The upper surface of this limestone, therefore, may be considered as the last chance for production in the downward search for oil and gas.

Possible Future Production.

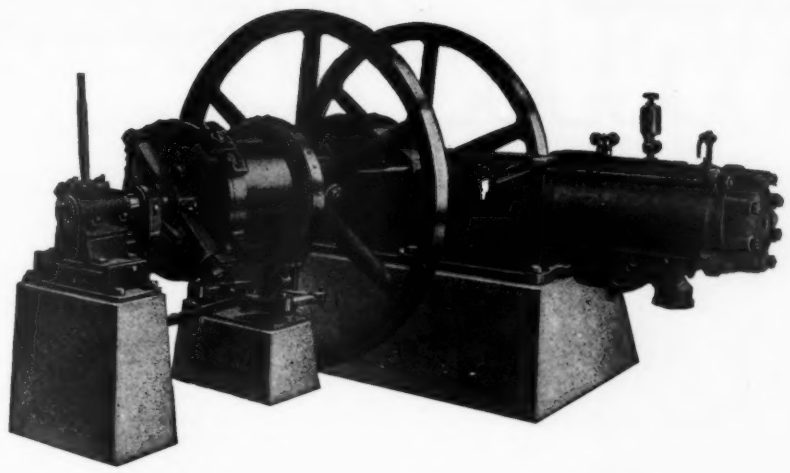
It may be inferred from the last paragrph above that the lowest probable productive stratigraphic horizon has been reached and all intervening possible pay sands penetrated here or there in this county. Future production, therefore, as far as Creek County is concerned, will have to be found in structures as yet undiscovered or developed or in structures not yet developed to the deepest known pay horizon. Methods for the search for new structures in this county have been suggested in earlier paragraphs. On the other hand, for making deeper tests on already developed structures only sufficient courage, coupled with good geologic judgment as to what kind of structure to test, and as to possible occurrence in that particular area of the desired deeper sand under favorable conditions, is requisite.

TANK CAR MERGER

WORCESTER, Mass., July 17.—The Keith Car Manufacturing Co. of Sagamore, Mass., has purchased control of the Standard Tank Car Co., Sharon, Pa., according to a statement authorized by William J. McKee, president of the new combination. The Standard Tank Car Co. builds tanks for railroad use, and steel tanks for storage and other purposes and controls the Standard Transit Co. which owns and operates 3,500 tank cars leased to oil and railroad companies.

ALVIN ZWERNEMAN WEDS

Alvin (Dutch) Zwerneman, one of the field representatives of the Axelson Machine Co., has fallen in the path of Cupid and was married recently in Corsicana, Tex. Miss Ruby Morgan is the young lady in the case. "Dutch" was formerly in the Tulsa office of the Axelson Machine Co. and more recently has been engaged in the California Field.



Standardization — Interchangeability — Service

The American Petroleum Institute is without doubt one of the most representative bodies of men ever enrolled in any Industry. One of its aims has been the standardization of equipment wherever possible.

One of these has been the Internal Combustion Engine Power Service.

We believe we have met this requirement and offer through our representatives and ourselves, to the Oil Trade, Gas Engines for Beam Pumping, Power Pumping, Power Service and lastly Cable Tool Drilling, fitted with self-oiling Standard eighteen (18) inch wide belt pulley, all cut steel geared Reversing Clutches, as follows:

25-30 H. P.
40 H. P.
50 H. P.
60 H. P.

All above sizes of Engines and Clutches are interchangeable on the same block and foundation without alteration.

—SERVICE—

We are offering not only Horse Power, Standardization and Interchangeability, but Service and Efficiency. Wherever Franklin Valveless Internal Combustion Engines are now marketed our representatives will furnish you, upon call, a factory mechanical expert to demonstrate and assist in the economic use of Franklin Valveless Internal Combustion Engines.

He is your man, at our expense; he'll benefit you!

Distributed by

Atlas Supply Company
Muskogee, Okla., and Branches

New Martinsville Supply Company
New Martinsville, W. Va.

Washington Engine & Pump Company
Washington, Penna.

Wooster Tool & Supply Company
Wooster, Ohio

International Supply Co.
Tulsa, Okla., and Branches

Atha Supply Company
Zanesville, Ohio

Bradford Sales Company
Bradford, Penna.

McEwen Brothers
Bolivar, N. Y.

Franklin Valveless Engine Company

FRANKLIN, Established 1879 PENNA.

Manufacturers of Fuel Oil and Gas Drilling, Pumping and Power Engines. Cast Iron Working Barrels

47 Years of Exclusive, Continuous Oil Field Service

"Dependable as a Lighthouse"

View of a section of a 60-mile pipe line of Oklahoma Natural Gas Company. Coated with Biturine Enamel under contract by Hill, Hubbell & Company.

We undertake complete contracts, or furnish a competent foreman, or supply the material with complete directions.

The A. B. C. of Corrosion Prevention

Q: What causes corrosion? A: Directly or indirectly the contact with metal, of moisture, acids and alkalies such as commonly found in the air or the soil. All authorities agree on that.

Q: What prevents it most effectively? A: A coating of metal surfaces that permanently inhibits such contact.

Biturine Enamel

"The Corrosion Preventive"

has a 20-year marine record and a 15-year underground record for this purpose, reducing upkeep to practically zero.

Further comprehensive Data on Corrosion Prevention, including Working Specifications, are compiled in our book on "Pipe Protection." Yours, if you write for it.

Hill, Hubbell & Company

Technical Paint Specialists

SAN FRANCISCO 115 Davis St. — LOS ANGELES 331 W. Eleventh St. — TULSA 215 E. Archer St.

Seattle Portland Baltimore New York

Bitulumin Liquid Binder furnished separately, if desired.

"Dependable as a Lighthouse"

PIPE TRADE POSITION VERY STRONG; TONNAGE OUTPUT AT NEW RECORD

By B. E. V. Luty

PITTSBURGH, Pa., July 19. — The steel industry as a whole continues to make a very good showing, buying and shipments holding up very well, despite the summer season, which the trade usually expects to be a sort of off period.

The pipe trade is in very strong position. While steel as a whole is nearly as active as early in the year, pipe is more so.

Pipe mills have fallen still farther behindhand in deliveries. This applies to most sizes, almost all, of casing, also to well tubing, 2-inch oil line and to some of the orders for line pipe. Merchant pipe is being shipped quite promptly. There has been no pressure in it, and even now there is a little idleness—just a little—of butt weld capacity. Lap weld capacity is fully engaged, and has been for several months.

Delivery offers of some sizes of casing now run to eight or nine weeks. A number of buyers have been canvassing the pipe mills, looking for deliveries, when they were not offered as early deliveries as they desired by the particular mills they usually patronize.

Competition in Promises

While there has been a full demand for oil country goods right along, the mills being behind their delivery promises in many cases is, on careful analysis, found to be due not so much to demand having suddenly proved larger than expected as to there having been competition between mills in delivery promises, whereby some mills promised deliveries they really had no certainty of being able to make. The condition is an illustration of the general fact that there is always competition of some sort. Prices being very steady and rigidly adhered to, there has been no price competition, and so the competition developed along the line of making delivery promises. This seems to be the reason of some of the delays that occur. Some of the delivery promises were not what they should have been.

While, as noted in previous reports, there is much line pipe business in sight, the mills are not seeking such business, being already so well filled. Thus far in the year the pressure upon lap weld capacity has been due more to demand for well material than to demand for pipe lines. While there has been a good pipe line tonnage, this has not been particularly out of the ordinary.

Pipe Mill Record

The only idle capacity in the pipe trade is some capacity that is not considered regularly operative, being in plants not entirely modern, and held as reserve, though some of this capacity is running, and a few butt weld furnaces that are either idle or are not running full. Practically speaking, there is substantially full operation of lap weld capacity, and 90 per cent, or nearly that, operation of butt weld capacity, making over 90 per cent operation for the entire pipe industry. As capacity has increased in the past year or so, this means a larger tonnage output than ever before accomplished —more than a full 100 per cent operation would have involved a couple years ago.

Steel ingot production in June was 3,750,653 tons, representing 80 per cent of capacity, the total for six months being 24,260,537 tons, a new half-year record. Production has now been exceptionally heavy for a year and a half, easily passing that of any previous period of 18 consecutive months.

The Steel Corp.'s unfilled obligations decreased by 170,608 tons in June, or much less than the average decrease in the preceding five months of decreases. This decrease represented 13 per cent of capacity, shipments being about 89 per cent and bookings about 76 per cent, against only 55 per cent in April, the low month of the half year.

An interesting item is that the corporation's June shipments averaged about 2,400 tons a day more than its production. There is reason to believe that this excess came out of stocks previously accumulated in oil country goods and in wire products. The National Tube Co. was known to have accumulated a large stock of certain sizes of casing.

French Government Striving to Maintain Motor Fuel Supply

By Charles E. Kern

Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., July 17.—Efforts being made by the government of France to obtain the supply of motor fuel are commented on by Vice Consul David H. Slawson, at Paris, in a report to the Department of Commerce. Mr. Slawson points out that France purchases 90 per cent of its supply of liquid combustibles abroad. For a long time the government has encouraged production of industrial alcohol both in France and in its colonies and is actively seeking a means of lowering the cost on the French market.

A campaign has been carried on since 1920 under the leadership of the French deputy, E. Barthe, to promote the use of a carburant produced in mixing gasoline and alcohol in practically equal proportions, called the "Carburant National." This carburant was ridiculed and censured by public opinion whose criticism was naturally encouraged by petroleum interests. The sponsors of Le Carburant National displayed considerable determination, however, and in January, 1923, obtained a technical victory over their adversaries when two prominent French scientists, M. Berthelot of the French Academy of Science and M. Perard, professor of industrial chemistry of the Central College of Arts and Manufacturers, reported that trials of the new carburant had incontestably proved its industrial value.

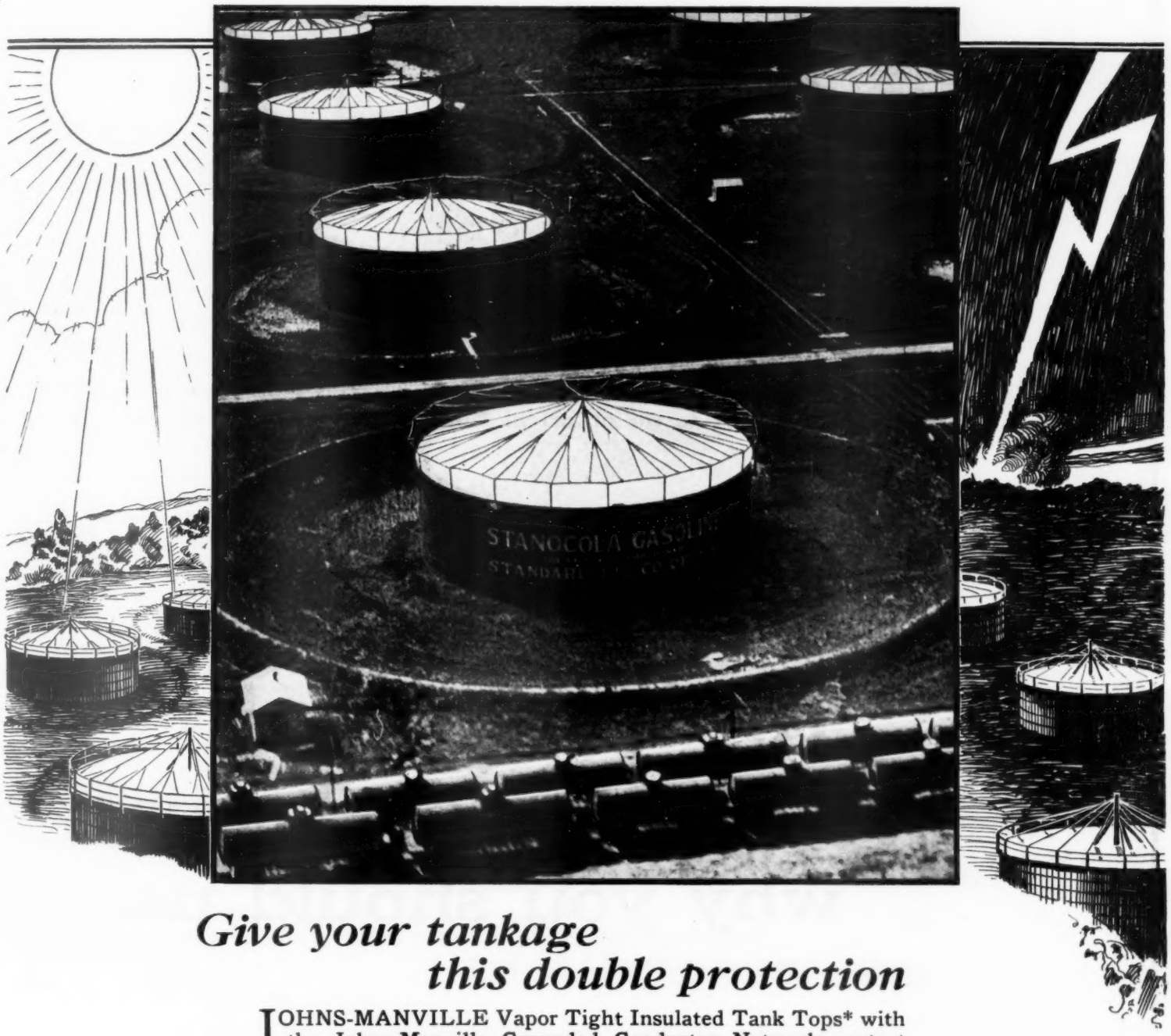
M. Perard stated in his report (1) that the consumption of this carburant in the motor is practically the same as that of gasoline; (2) that the running facilities produced are better; (3) that the ease and pliancy obtained permit a car to go up-grade with greater east without changing speed; and (4) that no noticeable deterioration in the pistons, cylinders or valves is observed from its use.

This technical victory was consecrated by the law of February 28, 1923, which obliges importers of gasoline to purchase from the French government an amount of alcohol equal to 10 per cent of such importations to be used in producing Le Carburant National or other carburants of alcohol mixture.

At this time the French government disposed of considerable reserve stocks of alcohol at a small loss which it was easily compensated for by the gain realized in the sale of alcohol for perfumery, toilet and medical preparations and various other purposes. In the way Le Carburant National was placed on sale at a slightly lower price than that of gasoline and petroleum importations were cut down in some degree. Paris autobuses and motor vehicles in the service of the war ministry have long utilized Le Carburant National and it is claimed that the results have proved quite satisfactory.

However, although solved in great measure from a technical standpoint, the problem is far from being solved economically, as during the past year the French government has been unable to furnish more than one-tenth of the quantities necessary to fulfill the requirements of the law of February 28, 1923, above mentioned.

EVAPORATION—LIGHTNING



Give your tankage this double protection

JOHNS-MANVILLE Vapor Tight Insulated Tank Tops* with the Johns-Manville Grounded Conductor Network protect against both evaporation loss and lightning fires—the two natural enemies of tank storage.

Vapor Tight Insulated Tank Tops have already thoroughly demonstrated their economy on wood and steel deck tanks of millions of barrels total capacity.

The grounded conductor network is an effective protection against lightning fires due to secondary discharge on wood deck tanks. Complete information on request.

*Patented—other Patents Pending

JOHNS-MANVILLE, Inc., 292 Madison Avenue, at 41st Street, New York City
Branches in all large cities For Canada: CANADIAN JOHNS-MANVILLE CO., Ltd., Toronto

Through Asbestos and its allied products: INSULATION, BRAKE LININGS, ROOFINGS, PACKINGS, CEMENTS, FIRE PREVENTION PRODUCTS

JOHNS-MANVILLE

Oil Industry Department

There are seven basic reasons why you should use

BRIDGEPORT
Field Proven Tools

BRANCH STORE

WICHITA, KANS.* RUSSELL, KANS.* GORHAM, KANS. EL DORADO, KANS. WINFIELD, KANS.
TONKAWA, OKLA. GARBER, OKLA. BRAMAN, OKLA.* PAWNEE, OKLA.* RANGER,

A complete stock of contractors' supplies carr

FIRST

The first basic reason why you should use Bridgeport field proven tools is because our factory organization is backed by that skill and efficiency which only years of experience in working with steel and its products can give.

SECOND

The second basic reason why you should use Bridgeport tools from one end of the string to the other is that our laboratory exercises constant control over the quality of the material from which the Bridgeport tools are made.

THIRD

The third basic reason is the Bridgeport personnel. Each man in charge of a machine is not there because he is a machinist but because he can follow an engineer's plan with a craftsman's devotion.

FOURTH

The fourth basic reason why you should use Bridgeport tools is because we maintain an extensive plant and field research department. Because of this department you are sure of the quality of the tool before you buy or rent because it bears the name of Bridgeport.

FIFTH

The fifth basic reason for your always using Bridgeport tools is the size of the factory behind our products. "Any tool, any time, any place" is possible with us only because our factory is large enough and our physical equipment complete enough to make good that promise implied in our slogan.

SIXTH

The sixth basic reason is the twenty years of Bridgeport history as a manufacturer of drilling and fishing tools and because in that time Bridgeport has risen from a position of practical obscurity to one of dominance in a field filled with good ones.

SEVENTH

The seventh basic reason for using Bridgeport tools from one end of the string to the other is because of the location of our branch stores at points selected because of their convenience for serving you. These branches help us make good our service promise of "any tool, any time, any place."

THE BRIDGEPORT MACHINE COMPANY

NCH STORES

FIELD, ANS. TULSA, OKLA. STROUD, OKLA. DEPEW, OKLA. WETUMKA, OKLA.
A.* R GER, TEX. PANHANDLE, TEX.* BRECKENRIDGE, TEX. MARIETTA, OHIO

tors' sup s carried in stock at these points.

Put your Power Piping Problems up to Power Piping

FOR EVERY OIL FIELD NEED

What is *your* problem?

It may be an intricate piping system that needs a solution that departs from accepted practice or it may only appear complex and lend itself to a simple design following precedent, but in either case our engineers can best serve your interests, as they have helped many of the most prominent refineries in the field. Write us and we will gladly discuss without obligation our method of working *with* you and *for* you!

Power Piping Company
Pittsburgh

Illustrated is a welded header fabricated for a southwest refinery.

EASTERN FIELDS

(Continued from Page 60)

tract. In Butler district, Wayne County, the Chartiers Oil Co. is drilling on the Ella McGee farm. In Lincoln district, Frank Yates is drilling on the Caldwell-Colton farm. In Marsh Fork district, Raleigh County, the Fisher Oil Co. has the rig up for No. 4 on the Rowland Land Co.'s tract. All previous tests on this large tract came in gassers in the Berea grit. It has been several years since the last well was drilled. Mingo County has more work under way and starting than any other of the lower counties.

Southeastern Ohio

At the close of the week of development work, the southeastern Ohio fields reported but few completions. In Lot 7, tract 13, Chatham Township, Medina County, M. A. Dempsy completed No. 39 on the D. Rose farm good for 5 bbls. a day. In Fall Gore Township, Hocking County, the Griffin Producing Co.'s No. 7 on the Dora Thomas farm is a duster in the Berea grit. In Newton Township, Licking County, the Ohio Fuel Supply Co.'s first and second tests on the Ellen E. Forry farm are good for 3 and 2 bbls., respectively. In the same township, L. A. Patton & Co. have a 3-bbl. pumper at No. 3 on the McCormick farm. Moore & Co.'s test on the A. W. Hartman farm is a duster in the Berea grit.

Hocking County

In the southeast quarter of Section 27, Coal Township, Hocking County, the Ohio Fuel Supply Co. has completed and shot in the Clinton sand No. 5 on the Charles Trimmer farm, good for 20 bbls. a day. In Lot 21, Athens Township, Athens County, Coke & Co. have completed a test on the Peter Welsh farm. It is a very light pumper in the Berea grit. In the center of Section 7, Aurelius Township, Washington County, the Citizens National Bank of Caldwell had the same luck when it drilled No. 3 on the A. J. Longfellow farm through the Macksburg 300-foot sand.

Gasser in Licking County

In the northwest quarter of Section 14, Fallsburg Township, Licking County, the Leonard Oil & Gas Co. has completed in the Clinton sand a test on the William Varner farm. It is a gasser good for 1,900,000 feet. Within the past few months the deep sand territory has been completing quite a number of fair gas wells.

Shallow Sand Completions

In the northwest quarter of Fallsbury Township, Licking County, Stearl C. Brown and others have completed in the Berea grit a test on the F. E. Baughman farm, consisting of 62 acres. The well produced 12 bbls. the first 24 hours after shot. In the northwest quarter of Section 21, Jackson Township, Knox County, the Margaret Oil Co.'s No. 6 on the C. P. Davidson farm is a 5-bbl. pumper in the same formation.

In the southeast quarter of Section 21, York Township, Morgan County, the Ohio Fuel Supply Co. completed and shot No. 3 on the Matilda Eppley farm good for 10 bbls. a day. In Section 58, Salem Township, Washington County, the First National Bank of Marietta has a duster in the stray sand at No. 12 on the W. G. Jackson farm.

Southeastern Ohio

In the northeast quarter of Section 29, York Township, Morgan County, the Pure Oil Co.'s test on the G. W. Fye farm is good for 10 bbls. a day in the Berea grit. In the southwest quarter of Section 33, same township, the same company's No. 8 on the Isaac Smith farm is a 5-bbl. pumper in the same formation.

In Section 14, Madison Township, Licking County, Spindler & Donalson have completed and shot in the Berea grit a second test on the William S. Rogers farm. It produced 14 bbls. the first 24 hours. The Detex Oil & Gas Co.'s No. 7 on the Otto Franks farm, in Section 13, Franklin Township, Licking County, is a 5-bbl. pumper in the Berea grit.

In the southeast quarter of Section 10, Madison Township, Columbiana County, R. C. Miller has completed No. 3 on the R. E. and M. J. George farm. It is a very light pumper in the Squaw sand. In Section 31, Aurelius Township, Washington County, Beeson & Athey have completed No. 11 on the Hupp-Murray farm. It is a very light pumper in the Macksburg 500-foot sand.

In the southwest quarter of Section 15, Perry Township, Coshocton County, Ohio, the Preston Oil Co.'s test on the R. T. Rine farm produced 172 bbls. the first 24 hours after shot in the Clinton sand.

In the northeast quarter of Section 34, Green Township, Hocking County, the Griffin Producing Co. has completed No. 4 on the Barlow Oil & Gas Co.'s lease. It is a fair gasser in the Clinton sand. In the southeast quarter of Section 13, Bowling Green Township, Licking County, the Midland Oil Co.'s second test on the Violet Bogle farm is a duster in the Berea grit.

In Section 8, Liberty district, Washington County, Heldman & Co. have a duster in the Berea grit at a test on the William Heldman farm. In Lot 150, Fearing Township, Washington County, the Roiter Oil Co.'s second test on the Charles Rister farm is a light pumper in the Cow Run sand.

In the northwest quarter of Lot 28, Litchfield Township, Medina County, Kundton & Hulse have completed a test on the Henry Pfeifer farm good for 5 bbls. a day in the Clinton sand. In Lot 4, Chatham Township, E. R. Edson & Co.'s No. 22 on the Carl G. Packard farm is a very light pumper.

Southwest Pennsylvania

In Richhill Township, Greene County, the Carnegie Natural Gas Co. has a gasser in the Gordon sand at a test on the E. H. McClelland farm.

MICHIGAN FIELDS

(Continued from Page 60)

Street, and practically 5 miles west of the discovery well, has been abandoned in the first hole and the drilling outfit moved over, starting the second hole. The mud vein was encountered around 500 feet and for a week after a little progress was made. It is the first drilling well in the field to run up against a mud proposition of the kind.

Charles Brandt, contractor and operator, has started his well on the Thomas Walker property, near Madison and Deindorfer streets, which will be an offset to the new well startnig for the Saginaw Prospecting Co. on the Waterworks Park subdivision. Mr. Brandt is a well informed oil man, having spent many years in the Indiana, Illinois, Ohio and other old-time fields.

The outfit for the D. W. Bergherm well on the John Winter farm on the Shattuck Road is on the ground making ready to spud. The Superior Oil Co.'s well on the Spatz lease is close around 1,500 feet and with no bad luck should soon strike the Berea sand.

The Ohio Fuel Corp. struck Marshall sand at 628 feet at its test on the Ernest Fisher farm, on Bay Street, something like half a mile or so, northwest of the discovery well.

Much interest is manifested in the wildcat test being drilled by the Gardner Petroleum Co., of Tulsa, Okla., well known Mid-Continent operators, of which James H. Gardner is president. This test is on the southeast corner of the Henry Schwannecke farm, in the northeast quarter of Section 33, Buena Vista Township, Saginaw County, about 3 miles south and about 4 miles east of the discovery well of the Saginaw Prospecting Co. on the Deindorfer Woods, in Section 14, Saginaw Township, or about 5 miles on a direct line southeast of the discovery well. This well is very interesting as to its location. Geologically the Gardner test should reach the Berea sand much higher than in the field to the north of Saginaw. If oil is not found in the Berea in the Gardner well there are still chances below, as the Travers, which carries oil, should be found from 2,300 to 2,600 feet, then the Dundee, another oil-carrying sand, at from 2,900 to 3,000 feet, and several other carrying formations at greater depths. This well is close around 1,000 feet and should reach the Berea

International Harvester Equipment

TRUCKS • • TRACTORS

INTERNATIONAL HARVESTER offers transportation buyers in the oil business an unmatched line of automotive equipment. Each model and each type of equipment has grown out of nearly a quarter of a century of catering to the commercial motor vehicle requirements of America.

Heavy-Duty Trucks: These popular models are making history among some of the country's most important truck users. Oil companies, contractors, railroads, express companies, municipalities, warehousemen, manufacturers, retailers and others are hauling their heavy loads with International Trucks of from 1½-ton to 5-ton maximum capacities.

Speed Trucks: The list of International Speed Truck owners is equally impressive. Wherever lighter loads must be hauled quickly these economical trucks are found in great numbers. Capacities include a ¾-ton Special Delivery, 1-ton Speed Truck 1½-ton low-chassis "SL," and 1½-ton short-wheelbase "SD."

McCormick-Deering Industrial Tractors: The illustration below shows one of these tractors in pipe line service. These compact, full-powered units are available with wheel and tire equipment for all classes of industrial and municipal work. Ideal for heavy duty service with trailers and semi-trailers.

120 Company-Owned Branch Houses: The largest company-owned truck service organization in the world is at the call of International Truck and McCormick-Deering Tractor owners.

INTERNATIONAL HARVESTER COMPANY
606 So. Michigan Ave. of America (Incorporated) Chicago, Ill.

Typical of a Thousand Letters

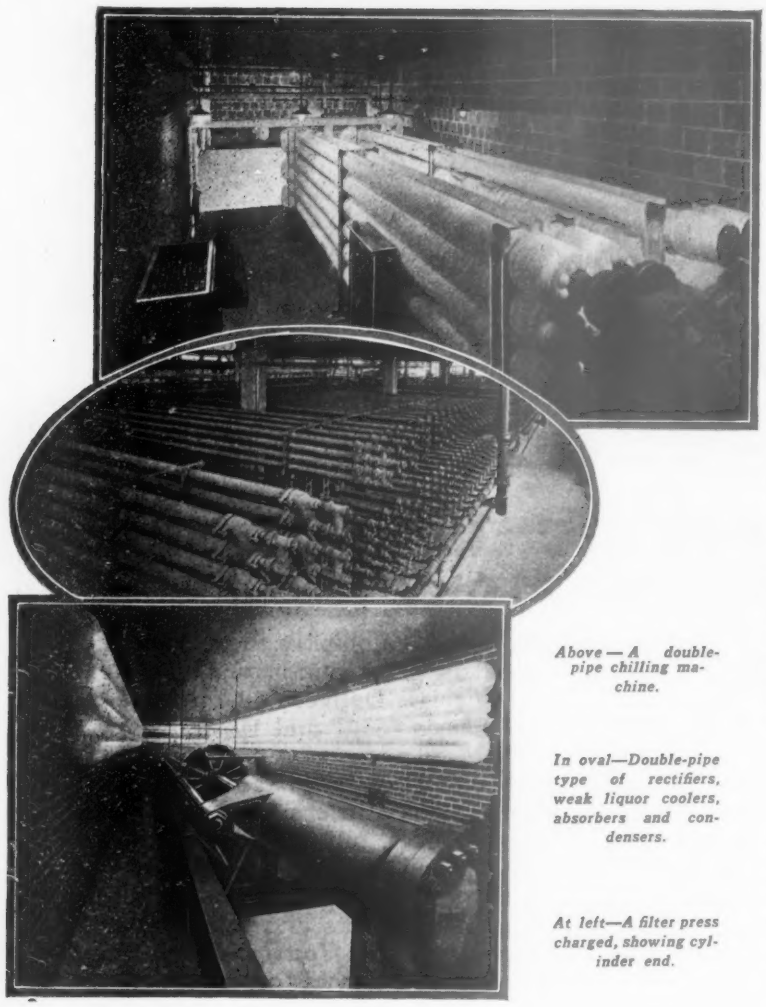
"We want you to know that we are enjoying complete satisfaction from our five International trucks. Our rapidly increasing business is due in large part to the unfailing performance of our International fleet. When we buy more trucks, we will buy Internationals." *(Note: they have since bought five more.)*

* * *

"This makes our eleventh International truck. In our seven years of experience in road building, we have found that Internationals will stand up under hard usage longer than any other of the numerous makes we have used. As for your service, it is unequaled."

If in need of transportation units, take a tip from the thousands of International owners. Ask us for complete information on any or all models.

Hauling a 6-ton load with ease.



Above — A double-pipe chilling machine.

In oval—Double-pipe type of rectifiers, weak liquor coolers, absorbers and condensers.

At left—A filter press charged, showing cylinder end.

Gulf Refining Chose Carbondale

Supreme Auto Oil owes its popularity to proven lubricating qualities. It can be depended upon for consistent performance.

The same may truthfully be said of Carbondale Refrigeration. Refiners know from experience that Carbondale Machinery will give the same dependable service, year after year.

The fact that plants in operation for more than 30 years are still giving satisfactory service, testifies to the quality of performance which may be expected.

CARBONDALE MACHINE COMPANY
Carbondale, Pa.
Branches in Principal Cities

Carbondale Refrigeration CARMACO *for Refiners*

before the close of the current month, unless drilling accidents happen. Clyde Van Vleck, of Toledo, Ohio, well versed on formations, states his belief that southeast and east of Saginaw and the strip running out south of Saginaw Bay looks more inviting to him than any other area around Saginaw, although he says the wells in the present Saginaw Field are good and well worth the going after, but he prefers the strip mentioned south and east of the bay.

Leasing Activities

Small parcels and lots within the city limits of Saginaw and suburban additions attract the leasers and if wells are drilled on the small lots as agreed, it will look like a forest of derricks.

Richard A. Cross, trustee, filed leases for record on 51 lease parcels of land in Carrollton Township, comprising approximately 80 acres in all.

S. M. Walley and L. W. McElwaine. of Tulsa, Okla., filed leases for record on the following properties: John G. Gempel, 40 acres, Saginaw and Thomas Townships; George J. Trinklein, 46 acres, James Township; William E. Root, 125 acres, Swan Creek Township; William E. Root, 240 acres, Swan Creek Township; James Walsh, 7 acres, James Township; Rose Winterstein, 80 acres.

Henry A. Marten, Willmette, Ill., left for record a lease on 240 acres owned by Joseph Benkert in Spaulding Township. Seven leases were taken by the Sun Oil Co., in Brant and St. Charles Townships, also one lease by the Superior Oil Co., the latter being on a number of city lots.

CENTRAL WEST FIELD

(Continued from Page 62)

No. 4 on the Seward R. Williams farm, Section 13. Same company made a location for a second test in the northeast corner of the Maud Oliver farm, of 67 acres, Section 18.

In Middleburg Township, Cuyahoga County, the East Ohio Gas Co.'s test in the northwest corner of the P. and A. Yenke farm, Lot 15, was a dry hole at a depth of 2,938 feet.

In Madison Township, Richland County, G. H. Schrack and others' test, 5 feet from the north line and 340 feet from the east line of the L. A. Keith 25 acres, mapped as the Crum land, was a failure, no sand being found.

In Knox Township, Vinton County, John DeLong and others made a location for a test on the G. C. Davis 39 acres, Lot 7. Shaffer and others' test in the southeast corner of the Louisa Cline 42 acres, Section 1, pumped 12 bbls. from the Berea sand. The Gordon Oil Co.'s test in the northeast corner of the T. G. Cline 160 acres in the southeast quarter of Section 7, pumped 5 bbls., while B. Henry and others' test, 1,220 feet from the north line and 300 feet from the west line of the Frank Martin 100 acres, Section 2, pumped 5 bbls., and No. 2 is now drilling in the southwest corner of the farm, due west of No. 1.

Offside Development

Reports are that the Logan Gas Co. has a showing of oil near the top of the sand in a test on the R. T. and M. F. Rine farm, Section 15, Perry Township, Coshocton County.

The Jewell Oil Co.'s No. 1 Leslie Fields farm, Section 23, Green Township, Hocking County, produced 18 bbls. the first 72 hours after completion. The Ohio Fuel Supply Co.'s No. 2, on the Nettie Richardson farm, Section 36, Troy Township, Athens County, showed 90,000 feet of gas in the Keener sand but is drilling deeper.

Indiana

Interest in the new Berne Field, 5 miles east of Berne, Ind., in the old Trenton Rock area, continues. The latest completion is a well drilled on the William Smithley 80 acres, in Section 6, Jefferson Township, Adams County, by Harmon and Watts. Top of sand was found at 1,076 feet and drilled 40 feet in the Trenton to a total depth of 1,116 feet, the well making 24 bbls., first pumping and is entirely free of salt water. This new completion is three-quarters of a mile ahead of production and is bound to stimulate drilling activities to the southwest. Funk and Arn, drilling on the Hawabacker farm, Section 17, Wabash Township, have a nice showing of both oil and gas at 13 feet in the Trenton, but were forced to shut down several days on account of a broken down drilling outfit. W. E. McKelvey, a Pittsburgh operator, is drilling a well on the William Bollenbacher 40 acres, on map as the Alfred Elliott farm, Section 6, Jefferson Township. "Dad" Rendall, veteran contractor of Cleveland, Ohio, is doing the work.

It is understood that M. S. Daugherty of Washington, C. H. Ohio, and William Kelly of Geneva, Ind., have made two locations for immediate drilling just to the southwest of the new Harmon & Watts producer on the Smithley farm. Schulte and Haney's No. 5 Schulte fee farm, Section 16, Blue Creek Township, Adams County, struck a good volume of gas in top of the Trenton and the gas is being saved as these operators have been very short of gas for fuel for their pumping power and drilling operations. No. 6 is being drilled on the same farm. The recent well of Harmon and others on the Mary Niblick farm, Section 5, Jefferson Township, continues to be the banner well of the field, making close to 50 bbls. per day naturally, and now four weeks old. Same parties are now drilling No. 6, same farm. Harmon & Watts are starting their second well on the William Smitley farm, Section 7, Jefferson Township. The recently completed gas well of Andrews & Christensen on the Christ Stengle 90 acres, Section 30, Monroe Township, is now making oil and its owners are confident it will be a nice oil producer. G. S. Lacknett of Pittsburgh, owner of a large block of acreage, is expected to start an active drilling campaign on his many proven leases. R. Grimm of Fort Laramie, Ohio, has purchased several leases on the south of the Niblic lease and is shipping in a string of tools. The oil in the Berne Field is of good gravity and the size of the late completions makes development work in the field more interesting and shows that Indiana is not pumped entirely dry as some may think.

The new field southwest of Washington, in Veale Township, Daviess County, in the southwestern part of the Hoosier State is being looked over carefully.

Illinois

The best completion in the Illinois Field for the week was made by No. 4 on the M. J. McClelland farm, Section 30, Martinsville Township, Clark County and owned by the Mahutska Oil Co. The oil was found in the stray sand and credited with a flush of 70 bbls. In the same township, Cambill, Rogers and others, known as the Terre Haute Oil Co., completed a second test on the Charles McFarland heirs' farm, Section 19, at a total depth of 1,378 feet, which is also in the stray sand, for 12 bbls. flush.

In Martin Township, Crawford County, Abbott and others' test, in the northeast corner of the L. M. Highsmith farm, in the southwest quarter of Section 12, struck pay at 964 feet and is estimated at 10 bbls., but not yet put on the pump. In Prairie Township, same county, McNally & Starr's No. 7, in the southwest corner of the Amelia A. Joseph farm, Section 23, was drilled to a total depth of 1,475 feet and a packer was set at 950 feet, the well doing 5 bbls. In Licking Township, same county, the Peoples Bank & Trust Co.'s No. 4, in the southwest corner of the Silas Wilkins farm, Section 4, was drilled to 1,020 feet where a fair gas pressure was opened and the well will be utilized to put pressure on the sand to increase the production of wells already drilled or to be drilled on the same farm.

In Casey Township, Clark County, W. C. McBride, Inc., completed No. 24, on the James Rush farm, Section 26, for a flush of 24 bbls. from a depth of 1,360 feet, which is the stray sand. In Parker Township, Charles E. King's No. 6, on the N. B. Lee farm, Section 29, pumped 2 bbls. from a depth of 398 feet.

In Wabash Township, Wabash County, the Adams Corners Oil Co.'s No. 6 J. T. Smith, Section 22, is showing for 20 bbls. Eastern Gulf Oil Corp.'s No. 3 Jesse

The Most widely used Process for treating "Cut Oil"!

TRET-O-LITE bears the world's stamp of approval, for it is today by far the most widely used process for recovering the petroleum from "cut oil" and "tank bottoms."

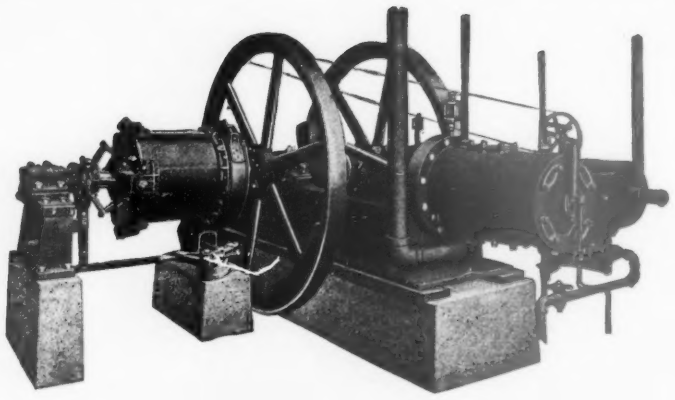
TRET-O-LITE has recovered hundreds of millions of dollars worth of oil. It has saved many wells from total loss—has even saved whole fields. It has saved more oil for large producers than has any other invention of recent years.

Investigate this simple, thorough process. Let us send our nearest field representative to see you, without obligation.

WM. S. BARNICKEL & COMPANY
St. Louis, Mo.
Offices and Plant:
Webster Groves, St. Louis County, Mo.

Process Patented

Tret-O-lite
Reg. U. S. Pat. Off.



6513 feet at 3.3 cents per foot

YOU can save money by using a Reid Drilling Engine. Here's a report of one drilling in the Bradford, Pennsylvania, field.

Four wells were drilled, averaging 1628¼ feet depth, a total depth of 6513 feet.

The total fuel bill, including gas for four rig lights, was $215.15, gas costing 65 cents per thousand feet.

Then:—

$$\frac{\$215.15}{6513 \text{ ft.}} = .033, \text{ cost per ft.}$$

Lubricating oil and repair cost were very small, adding perhaps one-half cent a foot to the drilling cost, and, incidentally this wasn't a new engine. It had previously drilled many other wells, and will undoubtedly drill many more.

These reports are not quoted as "records," They are given to show the high average performance of Reid Drilling Engines.

We will be glad to give you further information on their work.

JOSEPH REID GAS ENGINE COMPANY

OIL CITY, PENNSYLVANIA, U. S. A.

BRANCHES AND AGENCIES — Marietta, Ohio; Logan, Ohio; Newark, Ohio; Shreveport, La.; Charleston, W. Va.; R. B. Moore, Bolivar, N. Y.; Frick & Lindsay Co., Bradford, Pa., and Kentucky Distributors; S. R. Shoup, 708 Pacific Electric Bldg., Los Angeles, Cal.; Frick-Reid Supply Company, Tulsa, Oklahoma, and Branches, Distributors for Oklahoma, Kansas, Texas, Arkansas and Wyoming.

EXPORT SALES REPRESENTATIVE—Oilfield Equipment Co., Inc., 30 Church St., New York City.

BRANCH SHOP—TULSA, OKLAHOMA

Cisil, Section 2, shows around 20 bbls., while Risley and others' No. 1 W. M. Price, Section 14, looks good for 15 bbls.

In Lawrence Township, Lawrence County, the Ohio Oil Co. abandoned No. 5 Effie Eshelman farm, Section 33.

KENTUCKY-TENNESSEE

(Continued from Page 62)

others there is a bountiful supply. Much leasing is being done which means the drilling of many tests outside of defined territory.

Kentucky Oil Runs

During the month of June, 365,293.63 bbls. of crude oil were run through the major pipelines, making their reports in Kentucky. The eastern division led with a total run of 245,264.70 bbls. This crude was purchased by the Cumberland Pipe Line Corp. and runs as follows: Week ending June 5, 61,817.64 bbls.; week ending June 12, 63,472.66 bbls.; week ending June 19, 63,534.88 bbls.; week ending June 26, 56,439.52 bbls.

Pipeline runs during June in the western division amounted to 120,028.90 bbls. a decrease of 1,231.14 bbls., compared with the May figures. The runs were distributed by counties and districts as follows:

	Runs	Increase	Decr'se
Warren	35,081.00	.....	1,103.61
Barren	20,913.17	.....	101.44
Allen	25,106.37	.....	1,343.28
Cumberland-Monroe	3,389.45	.....	692.48
Ohio	29,035.33	2,736.64	.....
Hancock	2,617.18	.....	167.10
Daviess	1,425.66	.....	102.66
Hopkins	1,363.66	.....	86.34
Simpson	767.71	7.63	.....
Logan	139.81	.....	242.79
Clinton	189.56	.....	135.71
June runs	120,028.90	2.744.27	3,975.41
May runs	121,260.04	.....	.....
Difference	1,231.04	.....	.....

Note: Ohio, Hancock and Davis Counties constitute the Owensboro Field.

Western Division

The completions last week of the two wildcat ventures in the northwestern corner of Warren County, hit territory that was looked upon as gilt edged. One was the Petroleum Exploration Co.'s on the N. L. Miller, just south of Benleo, south of Greencastle Road and north of Hightowers Landing and northwest quite a distance from the Sandidge Pool, and the other drilled by F. F. Blanchard on the C. H. Daugherty land a short distance east of the Barren River, directly west of the Miller duster. Owing to the fact that the Sandidge Pool showed such nice production, the owners of the two wildcats were surprised that they failed to get a showing at depths of 1,416 and 1,335 feet. These two tests were not far removed from the trunk oil line of the Indian Pipe Line Co., which runs from Scottsville in Allen County through to Owensboro, and from there through Indiana to Lawrenceville, Ill., the location of the big Indian Refining plant. Had the wells proved productive a ready market prevailed for the oil. The wells' locations are about midway between Bowling Green and Morgantown in a rugged country and on a direct line between the Warren County and Owensboro fields.

Owensboro District

Development work is improving in the Owensboro Field of Hancock, Ohio and Daviess Counties and the way things look at this time will continue to improve until the cold winter season comes on. It is by far the best looking drilling proposition in the western division.

Oil operations in the Owensboro area are reaching the fever heat, and there is a scramble on for leases, for which real money is being paid, and preparations are in the making for drilling over the area in advance of development as well as within defined limits. Leases on more than 4,000 acres of land in the Whitesville Field were lodged for record in Daviess County, all being taken in recent time, some few being transfers from original lessees to operators on a speculative basis. The Pennsylvania-Indiana Oil Syndicate filed 35 leases, representing 2,206 acres, which is but a fraction of its holdings, and the Ohio Oil Co. recorded leases on 1,288 acres. It is understood this company also is taking a great many other leases.

A bunch of independent local men in the Owensboro district, made up of J. G. Stuart, Josh Powers, George Bales, Dave Duncan, W. F. Spence, of Kentucky and C. C. Chrysler, of Dayton, said to have secured some 4,000 acres, have started a rig going on the Pegram farm at Red Hill. This same organization expects to get going in the Bon Harbor section on a test to determine if there is oil west of Owensboro, as many believe there is, as well as east and southeast. Plans are now being made to start a first test in that area in a few weeks.

In the Ohio county clerk's office a large number of leases were recorded for the Taffy neighborhood, where operations are becoming more active since oil is found there.

E. M. Stebbins, well known California oil operator, has become interested in the Owensboro Field and is now on the ground looking over the situation. He is associated with L. N. Thompson, of Scottsville, Ky., and they are taking up a large acreage in leases and will shortly start testing out the acreage.

A group of young Owensboro business men, comprising Walter Johnson, Henry Hanning and F. E. Patton, and perhaps others, have organized to try their luck in the field. They have taken over several leases once owned by I. W. Harkless, and will begin drilling their first well within a very short time, which will be on the Pickett lease, near the Lon Helm lease of the Leeper Oil Co., which has developed some excellent pumpers.

The wildcat brought in by the Ohio Oil Co. on the Ambrose farm, near Pleasant Valley, 10 miles in advance of production, has been given a shot, and oil men express the opinion it will prove one of the best in the field. The oil rights on the Ambrose farm, however, do not belong to the Ambrose estate, but to James C. Ellis, an Owensboro contractor.

The best of the late completions is the Pennsylvania-Indiana Oil Syndicate's No. 6 on the Laura Mercer 84-acre farm, located 400 feet east of No. 5 and showing better than 35 bbls. The Chicago Petroleum Syndicate drilled in No. 8 on the Guenther-Gant lease located 400 feet east of No. 3 on the Joe Bob Ellis farm, and good for better than 20 bbls. The White Plains Oil & Gas Co.'s No. 3 on the Joe Bob Ellis lease of 50 acres and 400 feet south of No. 2, shows better than 10 bbls.

Several wells are in final stages. The Leeper Oil Co.'s No. 1 on the J. A. Greer 100 acres, is reported showing for a light producer. This lease is south of the White Plains holdings.

The White Plains Oil & Gas Co. has been delayed by a fishing job at its No. 3 on the Orella Ralph farm, but they have been recovered and drilling resumed. This company is starting No. 4 Joe Bob Ellis 50 acres, as well as No. 3 on the John C. Ward 50 acres. C. E. Daugherty and others are starting No. 13 on the Lucinda E. Crowe 153 acres. George Randolph is drilling a second well on the Waldingfield 37 acres. Wood Oil Co. is drilling No. 5 on the J. U. Bartley 189 acres. Chicago Petroleum Syndicate is working at No. 9 Guenther-Gant lease and the Penn-Indiana Oil Syndicate is drilling No. 3 on the W. L. Griffith 270 acres. George Randolph is also starting a well on the Ramsey farm. Close to 25 strings are now at work in the Owensboro Field, the largest number in the history of the field.

Barren County

Five wells were reported from the Glasgow Field of Barren County with 2 producers with 8 bbls. flush, 2 dry holes and 1 good gas well. In the Emery-Moore Pool, Fred C. Moore's No. 12 on the Howard farm, is rated at 3 bbls. settled. In the Hall Baker Pool, the Consolidated Gas Co.'s No. 30 on the H. W. Duff, proved a duster. In the Gorby Pool, J. J. Sayre's No. 4 Hatfield farm, shows for 5 bbls. In the Knob Road district, Ziegler Brothers' No. 3 C. D. Boyd, reported dry, while Wiggins

STEEL Refinery Equipment

AGITATORS
STILLS
CONDENSER BOXES
TANKS OF ALL KINDS
TOWERS
BLOW CASES

PLATE WORK OF ANY TYPE OR CONSTRUCTION

SEND US YOUR INQUIRIES

UNITED IRON WORKS, Inc.

TULSA KANSAS CITY DALLAS

—for your working barrel valves

MO-LYB-DEN-UM STEEL

Put Strom MO-LYB-DEN-UM Balls to work—they'll soon show you a difference—longer life, fewer pullings for replacement; the net result, greater production at a lower cost.

And that's what you want.

Where the flow of oil must go on—and on—and on; there you will find Strom Balls—giving better service for more months.

And why?—you ask.

Because Strom Balls are built to do more—of MO-LYB-DEN-UM steel—uniformly hardened and held accurate as to size to within, plus or minus, .00005 and sphericity to within .000025—*therefore all Strom Balls render a like service.*

Put Strom MO-LYB-DEN-UM Balls to work—today—you can get them from your regular supply jobber—if not, write us.

Strom Steel Ball Co.

The largest exclusive steel ball builders

612 Garfield Street

Oak Park (*Suburb of Chicago*) **Illinois**

and Gillespie's No. 2 Harrison, is reported around 1,500,000 feet of gas.

The Wood Oil Co. is making a deep test on the C. E. Spradlin farm, in the vicinity of Etoile, almost due south of Glasgow. Latest report is that the well had reached a depth of 1,200 feet, passing through the Pencil Cave formation at 1,195 feet. No sand was encountered above the Cave formation. Should Cumberland-Monroe formations continue into Barren County this test will have a chance in six or eight pays with the Trenton about 850 feet below the Pencil Cave. It will be a very important test of the lower formations and is being watched with much interest.

Whitlock & Cottingham have just completed No. 1 Mansfield Brothers well for a 5-bbl. producer from the brown sand at a depth of 418 feet which is just 170 feet below the black shale. The well is located 1½ miles south of Glasgow and just at the rear of the fairgrounds. This well is in the center of a large territory that is surrounded by dry holes and it looks like a new pool has been opened here. Mr. Whitlock who opened up the fish hatchery pool sometime ago in this district, located this well.

In the recently discovered Lecta Pool, east and south about 3 miles from Glasgow, the Esslinger Oil Co.'s No. 8 C. B. Jones farm, had a flat hole in the Black shale, lost tools 5 feet above pay and was compelled to skid the rig and start a new hole which will make the fifth start for No. 8. In the same pool, Baird & DeCaigney are drilling No. 4 on the Morgan lease.

In the Hall Baker Pool, Ziegler Brothers' C. D. Boyd No. 4 hole, No. 3 well was drilled in dry in both sands. They have moved the rig back to the original hole and will make another attempt to remove the tools and charge of nitroglycerin which is in the bottom of the hole. Hole No. 3 was located 50 feet from the original which was estimated at 12 bbls. before the tools were lost. Same parties' No. 6 on the same farm lost tools at 225 feet and is fishing. As soon as this hole is completed the company will move a rig to the newly acquired Dawder lease. Star Oil & Gas Co. is nearing pay sand at No. 9 Richardson lease. Wiggins & Gillespie are drilling No. 3 Harrison farm.

In the Gorby Pool, J. W. Porter is due in with No. 19 on the McGlochlin farm, while Lew J. Emery, Jr., Sons' are working at a well on the Jim Jones farm. In the Emery-Moore Pool, the Ruby Oil & Gas Co. is in sand with No. 7 Steffey, but nothing will be known of its production until cleaned out and put on the pump.

Other Developments

No completions were reported from the Cumberland-Monroe Fields. McClintock and others are drilling a test on the Pierce Brothers, on Wolf River, in Clinton County. In the Sulphur Creek district of Cumberland County, the Southern Producers Co. is delayed by a fishing job at a depth of 725 feet at No. 10 on the A. A. Huddleston farm. Hook and McComas are close to the same depth in a second test on the J. B. Riddle farm, in the same field. In the Bear Creek district, E. M. Treat and others are drilling No. 7 J. A. Dicken lease. On Steel Fork, Wilcox Brothers are drilling No. 5 Sarah Shackles farm, and this firm is also drilling No. 4 J. A. Melton farm, on Williams Prong.

In the Bowling Green Field of Warren County, W. Roy Hogan drilled a test on the Hindley-Walters farm, getting a 11-bbl. pumper at a shallow depth of 180 feet, while No. 2 located 420 feet north of No. 1 also showed better than 10 bbls. at 160 feet. No. 3, drilling southeast of Memphis Junction and south of Bowling Green, Victor Bartoletti and others' No. 1 on the Edward Covington farm, is credited with 5 bbls. at 381 feet. Stinson and Morrow are drilling No. 6 on the E. Morgan farm, while Paul Cooksey is doing the same in his No. 9 on the John W. Covington farm, Block 8, also south of Bowling Green. Onsel Brothers and others are working on No. 9 on the Josephine Ennis farm.

In the Scottsville Field of Allen County, Andrus & Works drilled a dry hole in a test on the R. Dinwoode farm at 351 feet. W. G. Moorman, receiver, is drilling No. 13 on the J. W. Frost farm, south of Scottsville and C. L. Sherwood is drilling No. 12 Elizabeth Stovall farm.

Eastern Division

Just at this time there is a little excitement in the Oliver Hill area of Carter County, and leasing is active due to the bringing in by the Rex-Pyramid Oil Co. of a test on the R. A. Carpenter farm, near Limestone, reported good for 5 bbls. from the Weir sand at a total depth of 446 feet. Several other wells will be drilled on this lease at once. One feature of this completion is the fact that it is located near the Chesapeake & Ohio Railroad and a siding is now on the property and no difficulty will be experienced in marketing the output. The fact that the oil comes from the well known Weir sand favors the propsects to a great extent. This sand is one of the best staying productive sands in the Blue Grass State. Other wells under way in the same area are being closely watched by leaseholders and scouts. R. A. Chiles is drilling No. 1 on the Hi. Owens farm, on Smokey Hollow which at last report had reached a depth of 300 feet and should be brought in within a week or so. Robbins & Watson made a location on Trough Camp Creek. The Eastern Gulf Oil Corp. on the Henderson heirs farm, on Rocky Branch, in Elliott County, is due for completion the latter part of July. Hovis, Young and Marcuk have a location made on the Carpenter heirs farm, near Limestone, in Carter County, and the machine is moving in to start spudding. Scouts and oil operators are visiting Oilver Hill to look over the wells and prospects of what looks like a new field. Acreage has been changing hands and fancy prices are being paid for acreage close to the Carpenter well. Visitors to the well say indications point toward the opening of quite a large field in the Berea and Weir sands in Carter County. Due to the shallowness of sand very light pumpers can be operated at a profit. The Kentucky Glycerin Co. shot the Carpenter farm well with 30 quarts and had to truck it to the well from Ashland where the magazine is located.

In the North Weir Field of Lawrence-Johnson Counties, in District 22, the Swiss Oil Corp.'s No. 11 on the Caney Sparks farm, produced around 5 bbls. from the Weir sand while in District 33 the same company's No. 20 on the J. M. Fyffe farm produced 10 bbls. from the same sand.

In District 6, Wolfe County, the Petroleum Exploration Co.'s No. 13 on the big Miller-Prewitt-Goff 600 acres, pumped 5 bbls. and No. 14, same farm, pumped 4 bbls. This company is drilling No. 4 on the Spencer heirs farm, same district.

TO INCREASE CAPITAL

OKLAHOMA CITY, Okla., July 17.—At its annual meeting of stockholders, the Goldelline Oil Corp will increase its capital to 1,200,000 shares, with a par value of $5, according to Dr. Joseph B. Umpleby, president and general manager. The corporation's capital was increased a few months ago when it decided to enter actively into the Texas Panhandle operations. A field office has been established at Amarillo in charge of Albert Olson, formerly a field superintendent for the Texas Pacific Coal & Oil Co. The Goldelline recently acquired the interest of the Buttram Petroleum Corp. in 960 acres in Hutchinson County, Texas, and on it four wells are drilling. Texas operations will be under direction of the Beaver Oil Co., chartered in that State, which is a holding branch of the Goldelline.

The Dressing Form

This Form used with a Bit Ram makes an easy operation of dressing Spiral Bits.

This is how they look when ready to make hole. Note the concave form which is essential to their superior performance.

Use Spiral Bits for Maintenance Work and you will adopt them for General Service.

"Drilling Tools Designed Right Will Drill More"

LEIDECKER
Spiral Bits

Patent allowed
Other Patents Pending

For the emergencies

Straightening crooked holes, drilling-up pipe collars or drilling in a wet hole are very common uses of Leidecker Spiral Bits. The more effective drilling action and the full-round-contact properties of Spiral Bits offer ideal features for such emergency work or maintenance drilling of every kind. A tool of accomplishment at the hazards recommends itself for regular duty for every drilling purpose.

Use Spiral Bits and Smile

Order through your Supply Store

THE LEIDECKER TOOL CO.

Manufacturers of
Well Drilling Tools, Machinery and Supplies
"Leidecker" Steel Frame Drilling Machines

Main Office and Works
MARIETTA, OHIO

Export Office: 90 West St., New York City
Branches: Casper and Basin, Wyoming; Bartlesville, Okla.

SPIRAL DRILLING TOOL COMPANY—Agents
329 E. Fourth St., Tulsa. Phone 3-1050

XUM

Simplicity
in a rig lighting unit
pays you dividends

PYLE-NATIONAL steam turbo-generators have the strength and stamina to stand up under regular service conditions in the field, and they have no extra parts or complications, no added weight that isn't used.

Their simple, sturdy design insures dependable operation without any tinkering or special maintenance work. A lot of operators issue instructions to the crew to leave the machine alone in the field, except for a drop of oil at intervals. The usual maintenance and inspection is made between jobs, and the turbo-generator runs through a whole job in the field without being touched.

This dependable rig lighting pays real dividends,—when a job would stop if the lights quit.

See a Pyle-National machine and you'll recognize the features that mean so much to you in the field.

Stocks in Tulsa and competent service men in the field mean satisfactory service, no matter where you are.

The Pyle National Company
General Offices and Works:
1334-1358 North Kostner Avenue, Chicago, Ill., U. S. A.
Direct Factory Representative:
C. T. TEWKSBURY
123 E. Jasper St., Tulsa, Okla.

THE PYLE-NATIONAL COMPANY

TRADE MARK REGISTERED

OGJ7-22Gray

ROYAL DUTCH PETROLEUM COMPANY REVIEW OF WORLD-WIDE OPERATIONS

In the annual report of the Royal Dutch Petroleum Co., two-fifths of which is owned by the Shell Transport and Trading Co., the views of the management regarding some aspects of the present petroleum situation are set forth as follows:

Though liquid fuel is never likely to replace coal, 1925 has shown that in the future there will be no lack of customers using oil for generating power. This is evidenced by the fact that more than half of the ships on the stocks are being fitted with Diesel engines, whilst railway locomotives with Diesel engines have also been successfully introduced.

Industry in general, recovering in several countries afflicted by the late war, has created a much greater demand for good lubricating oil; this has certainly also been assisted by the electrification of industries and means of transport on a large scale and by the unforeseen rapid increase of the number of elecrically-driven means of locomotion. It is for this reason that we devoted much of our attention to the manufacture of good lubricating oil, manufacturing the various grades on a large scale from suitable crude materials.

That the demand for asphalt would continue to increase in the past year was a foregone conclusion considering the rapid growth of mechanical transport. The first essentiality for such traffic is a dust-free, elastic road surface and the construction of such roads is increasingly occupying the attention of both the Dutch and other governments. Moreover, thanks to technical improvements, it is being realized more than ever that asphalt, besides forming a good road surface, can also be used to advantage for several building and industrial purposes, and we anticipate that in the near future this product will grow in importance in many branches of industry.

Mexico and Russia

Mexico, after the United States, the second most important petroleum producer, contributed less than in 1924. This decline will not have surprised the initiated in the petroleum industry; if Mexico were a country in which capital could feel safe and if it were not for the fact that an atmosphere of anxiety is created by the introduction of divers taxes and legislative measures onerous to foreigners, it might have been possible to check or at least moderate this decline by further exploration and development.

Regarding Russia, which once held such a prominent position among the petroleum producing countries, we can only speak with the necessary reserve. Official publications endeavor to create the impression of an increasing production in that country, and the layman is all the more inclined to believe this now that Russia is exporting such large quantities of oil. Anyone who takes the trouble to examine such statements critically will, however, draw other conclusions. It will not escape him, for instance, that the production for 1924-1925 was only 75 per cent of what it was in 1913 (and that was certainly not a favorable year for Russia), whereas the export in 1924-1925 was more than 145 per cent of that in 1913. The exported oil is often sold abroad far below its actual value, whilst at the same time in Russia itself there is a critical shortage of petroleum, both for lighting and for fuel purposes.

Thanks to regular development Persia maintained its position as fourth on the list of petroleum producing countries. Rumania surpassed itself and produced more this year than it has ever done before. The Netherlands Indies showed a steady advance.

Value Oil by Calories

A more and more intensive and perfected application of the so-called "cracking" of the heavy products, of which mention was already made in our previous report, renders it possible to extract from the crude oil those light products most in demand and which therefore yield the best financial results. It is not impossible that the technique of the industry may reach such a stage that the value of fuel will be determined solely according to its calorific effect. Should this occur then, no matter how paradoxical this may seem to be at present, the heavy oil, which contains more calories per liter, will become of greater value than benzine.

The question is sometimes asked whether nature and science will continue to work hand in hand in such a happy and ingenious manner and whether the world may not some day be faced with a shortage of petroleum. We entertain no such fear. In view of the fact that "cracking" has so far only been applied to a small portion of the existing products, and considering the large reserves still present in many parts of the world, we do not feel the slighest uneasiness as to the reply to this question. Moreover scientific research is being undertaken in the direction of constructing engines which dedevolp the maximum power with the smallest possible consumption, or finding a construction of an engine for consuming heavier oils in place of engines now using benzine. Such research, with the object of deriving the most advantage from existing supplies of oil, we consider to be of greater importance than predictions as to how long the earth will continue to yield the necessary oil; with all due respect for those who give expression to such prophecies we consider them to be founded on insufficient grounds and therefore dangerous. There is much to be said for the view that there need never be any question of shortage of petroleum if the industry is given a free hand and enabled to drill wherever there is reason to expect that oil may be found.

Such questions, occupying the thoughts of so many who try to read the future, inevitably result in attempts being made in some countries to invent processes for making a substitute for petroleum. Though such a process, it is reasoned, may not be remunerative immediately, it will certainly be so if ever the demand for oil exceeds the supply. We are not ignoring these efforts; on the contrary we are ready to interest ourselves in any inventions of this kind which we deem to be worthy of consideration, but it is also a known fact—as our director general clearly stated in the course of the past year—that such substitutes need not cause the least uneasiness in the petroleum industry, because they cannot compete with petroleum, though in times of war or under other abnormal conditions they may prove to be of great importance.

Royal Dutch Production

The figures for the production of the Royal Dutch group:

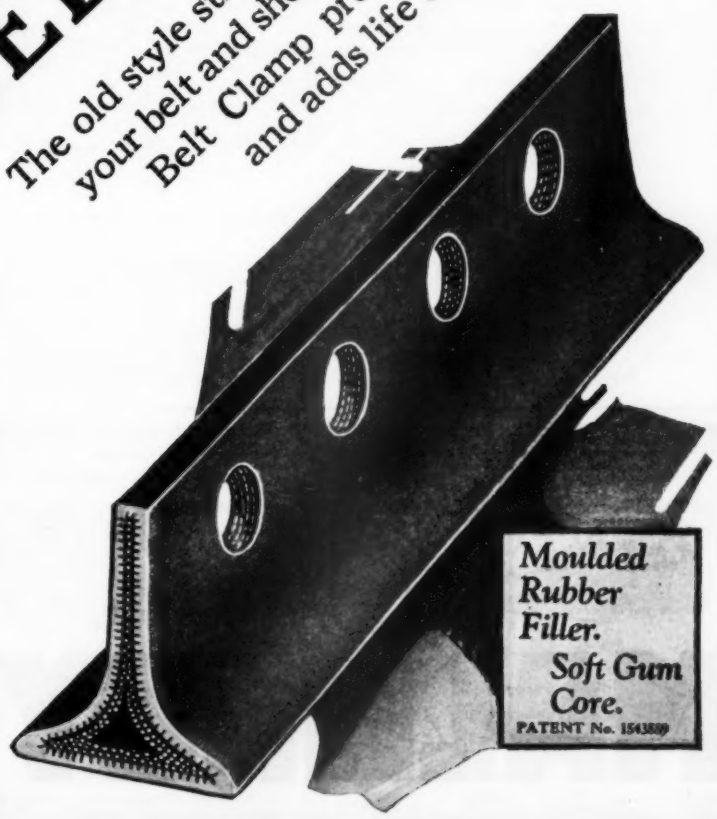
	1925	1924
Dutch East Indies	22,493,427	21,191,527
Borneo	4,596,023	4,500,009
Egypt	1,339,275	1,221,113
Rumania	2,946,980	3,379,425
Mex. (Corona)	10,314,720	20,211,570
Venezuela	12,326,910	8,718,608
Trinidad	385,125	495,110
United States—		
Roxana	17,454,345	14,235,510
Shell of Calif.	24,818,647	26,957,138
Total	96,676,332	100,820,001
Daily average	265,000	276,000
Daily av. in U. S.	116,000	113,000
Per cent in U. S.	43.7	40.9
Total U. S. prod.	775,852,000	713,940,000
P. C. U. S. Prod.	13	14
World production	1,066,220,000	1,013,139,000
P. C. world prod.	9.1	10

From this summary, which excludes Peru and Ecuador, it is seen that the fields which were available in these two countries have not come up to the expectations expressed in our previous report, although we have expended several millions of guilders on them. Our geologists' reports on the territories in Ecuador on which we had options and the results of our exploration left us no choice but to decide upon a complete withdrawal from that country, whilst a similar decision was taken as regards Peru in view of the unsatisfactory results of our exploration there.

The Argentine, on the other hand, though not included in the above statement, continues to give hope, although the administration of the mining law in that country may prove to be such as to make exploitation there unattractive. An oil-

PROLONG THE LIFE OF YOUR BELT USE FEDERAL BELT CLAMPS

The old style straight bar belt clamp ABUSES your belt and shortens its life. The Federal Belt Clamp prevents bootlegging and adds life to your belt.



At Your Supply Store

NATIONAL SUPPLY COMPANIES
CONTINENTAL SUPPLY CO.
OIL WELL SUPPLY CO.
INTERNATIONAL SUPPLY CO.
THE REPUBLIC SUPPLY CO.
BRIDGEPORT MACHINE CO.
JARECKI MANUFACTURING CO.
BOVAIRD SUPPLY CO.
DUNNIGAN TOOL & SUPPLY CO.
BRADFORD SUPPLY CO.
PRODUCER'S SUPPLY & TOOL CO.
HERCULES SUPPLY CO.
DECKER TOOL & SUPPLY CO.
WAGNER SUPPLY CO.
EL DORADO MACHINERY & FOUNDRY CO.
CALIFORNIA REPUBLIC SUPPLY CO.
REAGAN SALES CO.
PETROLEUM EQUIPMENT CO.
UNITED OIL WELL SUPPLY CO.
GREAT NORTHERN TOOL & SUPPLY CO. OF MONTANA

Federal Supply Company

Manufacturers

Ft. Worth . . Texas . . Mexia

KEYSTONE COPPER STEEL

MALONEYS AT BOLING, TEXAS

These Maloney 1000-Bbl. Stock Tanks are situated on the Hawse Lease of the Humble Oil & Refining Co., at Boling, Texas, sold and erected by our distributor, Peer Bolted Steel Tank Co., Houston, Texas.

We number among our customers practically all of the leading producing and refining companies, for these companies are careful buyers. They have learned from experience that rust-resisting Keystone Copper Steel insures long lived tanks, and that Maloney methods of seam reinforcement, vapor and gas-tight reinforced deck construction, combined with our patented "crimp" reduce evaporation losses to zero.

MALONEY cleaning out plates are large and set flush with bottoms. Valve and thief-hatch equipment are the best the market affords.

"Alone in Quality"

MALONEY TANK MFG. COMPANY
Tulsa, Okla.

Distributors at All Principal Petroleum Points

Sizes: 12 to 3,000 Barrels

Packed in Steel-Bound Crates for Export

"Buck" Type Vacuum Pressure Valves and Vacuum Breakers Furnished

MADE OF KEYSTONE COPPER STEEL — MALONEY PATENTED BOLTED COPPER-STEEL TANKS — MADE OF KEYSTONE COPPER STEEL

MALONEY

MALONEY

bearing layer was struck last year and by sinking deep wells on a fairly large scale we are now endeavoring to obtain more certainty as to the value of our holdings.

Negotiations are still being conducted in regard to the exact participation of the various interests in the Turkish Petroleum Co., Ltd. It is expected that a definite agreement will be arrived at and that the autumn will see the commencement of an extensive exploration campaign. Preliminary geological researches have already been made on a rather large scale.

Rumanian Difficulties

A closer scrutiny of the production figures for the Royal Dutch Group will reveal that as far as Rumania is concerned we have not yet been able to take our share in the increase of production in that country. This is in the first place to be attributed to difficulties encountered in the drilling of several wells on our Moreni Field, whilst also the yield from the wells already sunk in that field has been disappointing. But we are further handicapped by the ever-increasing rate at which the Lei is depreciating, a long series of heavy taxes, maximum prices, export duties and railway rates which again adversely affect export oil, all of which factors give very little encouragement to work in that country. If Rumania were only to follow the good example of the United States and realize that by granting a free hand to an industry which creates so much wealth and provides employment for so many people it can develop into a source of considerable prosperity for the country and for the population, they would find that such a policy leads to far happier results and is a far more adequate remedy for the continual depreciation of the Lei than a policy which is directed against foreign capital and is calculated to place so many burdens upon it.

LIBRARY BIBLIOGRAPHY OF LUBRICATING OIL

(Continued from Page 36)

for Reclaiming Lubricating Oil. Power, Vol. 51, March 9, 1920, pp. 391-392.

*Haon, H. J.—Reclamation of Lubricating Oil From Used Crankcase Oil. Rhodes, F. H. Ind. and Eng. Chem., 17:25-7, January, 1925.

*Heat and Soda Ash Method of Reclaiming Crankcase Oil. Nat. Pet. News, Vol. 12, March 3, 1920, pp. 77-78.

Henn, E. C.—Supplying Oil to 2,000 Automatic Screw Machinery. Am. Mach., Vol. 56, No. 1, January 5, 1922, pp. 4-7.

*Herschel, W. H. and Anderson, A. H.—Reclamation of Used Petroleum Lubrication Oils. Bur. Standards Tech. Papers, No. 223.

*Kauffman, H. C.—Yields and Costs in Refining Lubricating Oils. The Oil and Gas Journal, Vol. 24, January, 28, 1926, pp. 146, 148, 150-51.

Lee, C. K.—Using a Lubricating Reclaimer on Semi-Diesel Engines. Power, Vol. 57, February 6, 1923, p. 207.

Levy, J.—Conservation, Upkeep and Purificating Oils. Technique Moderne, Vol. 16, No. 13, July 1, 1924, pp. 453-460.

*Lubricating Oils. Pet. Age, Vol. 17, February 1, 1926, pp. 57. Vol. 12, August, 1923, p. 49.

Mac Coull—Consumption and Dilution of Automobile Engine Oils. Lubrication, 10, No. 6, 66 (1924).

Merrill, Keith—The Reclamation of Grease and Oil. Pet., Vol. 4, March, 1918, pp. 83.

Meston, A. F.—Purification of Liquids by Centrifugation. Chem. Age, Vol. 31, August, 1923, pp. 370-72.

*Meston, A. F.—Separation and Purification of Liquids by Centrifugation. Min. and Met., Vol. 4, June, 1923, pp. 308.

*Publications are in this library.

Miller, C. D.—Process for the Reclamation of Crankcase Oil. Bus Transportation, 5:6-9, January, 1926.

A New Oil Reclaiming Process. Eng. Production, Vol. 7, No. 138, March, 1924, p. 88. Elec. Times, Vol. 65, No. 1,689, Feburary 28, 1924, p. 251.

*Nugey, A. L.—Cutting Lubricant Manufacturing Cost With the Centrifuge Process. Oil Trade, Vol. 16, August, 1925, p. 26.

Oil and Grease Extraction From Exhaust Steam. Power Pl. Eng. 29:405, 558, April 1, May 15, 1925.

Oil and Waste Reclaimed With Profit in Milwaukee. Elec. Ry. Jl., Vol. 60, No. 21, November 18, 1922, pp. 805-08.

Oil Extraction and Chip Disposal. Am. Mach., 62:920-1, June 11, 1925.

Oil Reclamation As You Go. Bus. Trans., 3:373, August, 1924.

Outfit to Reclaim Crankcase Oil. Bus. Trans. 2:582, December, 1923.

Parrish, W. F.—Reclamation of Used Motor Oils. Sci. Lubrication, Vol. 1, No. 6, June, 1921, pp. 5-7.

Nautical Gazette.—Purification of Lubricating Oils, Vol. 107, July 12, 1924, p. 44.

Pacific Marine Reviews.—Purification of Used Lubricating Oils, Vol. 20, August, 1923, pp. 398-9.

Reclaiming of Waste Oil. Power Eng., Vol. 19, No. 217, April, 1924, pp. 138-39.

Reclaiming Used Lubricating Oils. Bus Transportation, 4:341-3, July, 1925.

Reclamation of Lubricating Oils. Bulletin Technique du Bureau Veritas, Vol. 3, No. 3, March, 1921, pp. 64-67.

Reclamation of Used Lubricating Oils. Vic Technique et Industrielle, Vol. 5, No. 6, October, 1924, pp. 457-58.

*Reclaimed Motor Oil Better Than New. Sci. Am., 133:125, August, 1925.

*The Oil and Gas Journal.—Reclaimed Tests High as Lubricants, Vol. 24, January 21, 1926, p. 68.

*Reconditioning Crankcase Lubricating Oil by a New Method. Automotive Ind. Jour., Vol. 46, April 27, 1922, pp. 910-11.

*Rhodes, F. H. and Haon, H. J.—Reclamation of Lubricating Oil From Used Crankcase Oil. Ind. and Eng. Chem., Vol. 17, January, 1925, pp. 25-27.

Rouge, D. L.—Waste Renovator and Oil Reclaiming Machine at the D. L. and I. Rouge Shops. Ry. R. 77:895-6 December 12, 1925.

Shephard, John V.—Oil Purification by the Continuous By-Pass Method. Pac. Mar. Rev., Vol. 20, No. 3, March, 1923, pp. 147-150.

*Skinner, R. L.—Rectification of Diluted Crankcase Oil. R. L. Skinner, Soc. Auto. Eng. J. 15:51-9, July, 1924. Auto. Ind, 50, 1365-7, June 26, 1924.

*Stafford, R. B.—Oil Crankcase Oil Sold for Fuel by Most Oil Companies. Nat. Pet. News 16:491, March 5, 1924.

A System for Purifying Crankcase Oil, Motor Age, Vol. 45, March 6, 1924, pp. 17-18.

Waters.—Carbonization of Lubricating Oils. Bur. of Standards Circ. 99.

*White, J. F.—Reclaiming Oil From Vapor in Turbine Hearings. Power, 58: 777, November 13, 1923.

Wiessner, F.—Frugal Use of Lubricating Oils. Chem. App. January 2, 1915, pp. 176-79.

Wilson, R. J.—Recovery of Lubricating Oil. Elec. Times, Vol. 59, No. 1,528, January 27, 1921, pp. 63-65.

CALIFORNIA RECEIPTS AND PETROLEUM IMPORTS

Imports of crude and refined oils at the principal United States ports for the week ended July 10 totaled 1,695,000 bbls., a daily average of 242,143 bbls., compared with 1,280,000 bbls., a daily average of 182,857 bbls. for the week ended July 3, and a daily average of 204,893 bbls. for the four weeks ended July 10.

	Week Ended July 10
At Atlantic Coast Ports—	
Baltimore	296,000
Boston	176,000
New York	608,000
Philadelphia	100,000
Others	80,000
Total	1,260,000
Daily average	180,000
At Gulf Coast Ports—	
Galveston district	123,000
New Orleans and Baton Rouge	201,000
Port Arthur and Sabine district	63,000
Tampa	48,000
Total	435,000
Daily average	62,143
At all United States Ports—	
Total	1,695,000
Daily average	242,143
Daily average 4 weeks ended	204,893

Receipts of California crude and re-

Jones Giant Sucker Rods

WITH U.S. STANDARD THREAD

"No matter what thread is used it is only as good as the machine work"

The Better Rod and the Strongest Coupling

NOT satisfied with having the best Sucker Rod made, bar none—we now offer two exclusive advantages—details, of course, but highly important to the user. ¶The Jones Pin Protector, *(patent applied for)* shown to the left, above, protects the threads from dirt, sand and injury. ¶The Milk Bottle Plug, shown to the right, above, insures clean, dry joints always. ¶Specify Jones Sucker Rods, they are always better, all ways.

5/8" AND 3/4" PERFECT AND GIANT RODS HAVE 1" PINS

THE S.M.JONES COMPANY

TOLEDO OHIO

MID-CONTINENT OFFICE 602 WRIGHT BLDG. TULSA, OKLA.

The largest exclusive manufacturers of sucker rods in the world

This is No. 15 of a series on specifications—keep for reference in ordering.

BARSCO PRODUCTS

for Oil and Gas Well Drilling

ROTARY TOOL JOINTS

(Patented)

Pin End

Box End

Forged Steel

The "pin" is tempered to a special specification and hardened to withstand the most severe usage.

Construction

The *forged steel* from which this joint is built has a tensile strength of from 90,000 to 110,000 pounds.

Size Pipe, Inches	Length, Inches	O. D. of Joint, Inches	Size of Taper, Inches	No. of Threads, per Inch	Weight, Pounds
2½	15	3 15-16	2 x3	5	45
3	15	4¼	2¼x3¼	5	55
4	18	5¾	3½x4½	5	70
4	20	5¾	3½x4½	5	75
6	18	7¾	5 x6	4	130
6	20	7¾	5 x6	4	155
6	24	7¾	5 x6	4	175

Joints of other sizes, length or thread other than specified above can be furnished. When ordering, state make, size and weight of rotary pipe on which tool joint is to be used.

Stocks carried by Dealers

BARTLESVILLE SUPPLY COMPANY of Missouri
3400 MAURY AVENUE—ST. LOUIS, MISSOURI
Export Office: 2 Rector St., New York City

Manufacturer's Representatives

B. & A. Specialty Co., Tulsa, Okla. · Robert J. Miller Co., Houston, Tex. · Miller Tank & Supply Co., Casper, Wyo.

—Write for Complete Catalog

fined oils at Atlantic and Gulf Coast ports for the week ended July 10 totaled 386,000 bbls., a daily average of 55,143 bbls., again 852,000 bbls., a daily average of 121,715 bbls. for the week ended July 3, and a daily average of 105,036 bbls. for the four weeks ended July 10.

	Week Ended July 10
At Atlantic Coast Ports—	
Baltimore	76,000
New York	310,000
Total	386,000
Daily average	55,143
Total Atlantic and Gulf Coast ports	386,000
Daily average	55,143
Daily average 4 weeks ended	105,036
Distribution of total California oil is as follows:	
Crude	176,000
Gasoline	76,000
Gas Oil	65,000
Fuel Oil	69,000
Total	386,000

SIMPLICITY OF DESIGN MARKS PORTABLE PLANT

Simplicity is one of the advantages of the charcoal process. This feature is readily apparent in the new portable type of charcoal gasoline plants being sold by the Gasoline Recovery Corp.

The portable charcoal plants now being placed in operation are in four units, the absorbing units and the condensing unit. The units are set side by side on temporary wood skids or concrete piers. Gas, steam and water are piped to them. Stream is commonly furnished from two or three portable oil country boilers. The water is pumped by pumps mounted on the condenser unit.

The weights of the units complete including the charcoal in the absorbers are about 14,000 pounds for the absorber units and 18,000 pounds for the condenser unit. They arrive on the field on one car. When set in place they occupy a space 12 feet wide and 32 feet long. There remains but to assemble the gas piping on the absorbers and provide the steam, water and gas.

Three million cubic feet per day at 6 pounds pressure can be passed through one of these plants with safety. Five million can be handled at 20 pounds and at 90 pounds 15,000,000 cubic feet is a safe rating.

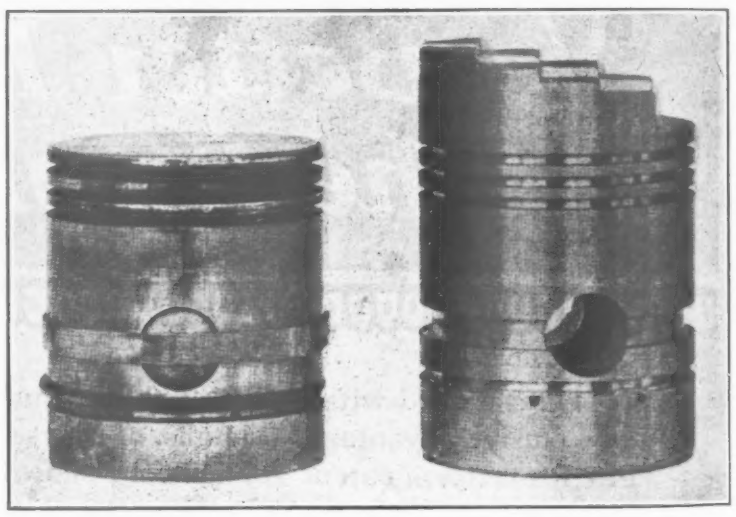
The absence of moving parts is a marked feature. The water pump is the only "machinery." Gas engines and compressors are not needed. Five pounds gas pressure is ample and what is more, the plants are equally as efficient on low as on high pressure.

Rich gas is real feed for these plants. However, they do equally as well on lean gas without additional equipment. It is usual in this industry to expect reduced efficiency with overload. In this respect the charcoal plants differ. Their efficiency is not materially affected when subjected to high overloads continuously.

RUSSIAN OIL REPORT

WASHINGTON, D. C., July 19.—Oil production in the Soviet Union for May broke all monthly records for postwar production, with an output of 721,796 metric tons, according to figures of the Russian Information Bureau. This compares with 661,008 tons in April, an increase of 9.2 per cent, and 589,961 tons in May, 1925, an increase of 22 per cent. The number of wells drilling and deepening during the month was 436, compared with 426 in April. Drillings were 25,310 meters, compared with 25,132 meters in April. Despite the increased output, the number of workers at the end of May was only 37,019, compared with 37,363 at the end of April.

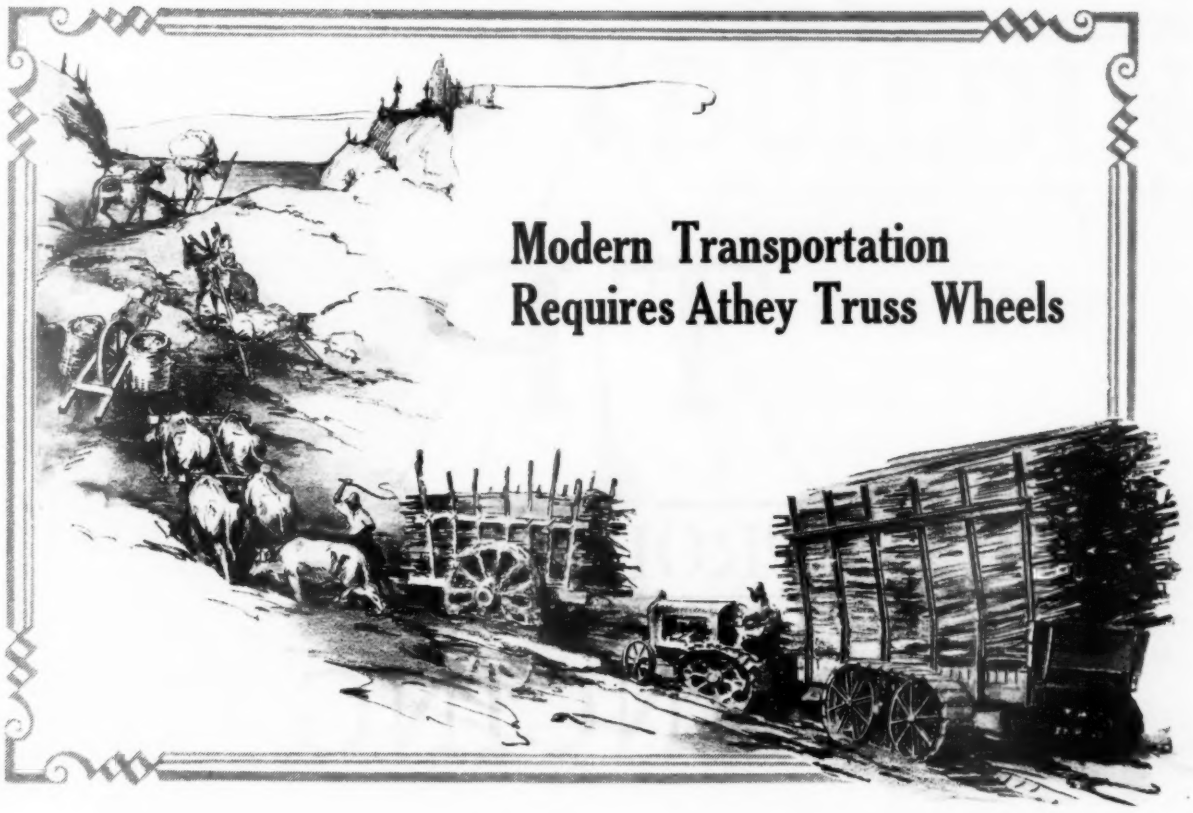
"STAIRCASE" PISTON TO ABOLISH KNOCKING?



M. Dumanois, head of the Technical Services of the French National Office for Liquid Fuels, has given his opinion that antiknock results ought to be possible of attainment by physical means as well as by adding substances which give chemical reaction. Slowing down the flame propagation so as to avoid detonation, he said, might perhaps be achieved by altering the shape of the combustion chamber, which results in changes in the sequence of pressure variations.

This, says a Paris correspondent of the London Oil News, has now been confirmed by actual experiment, and M. Dumanois has run a car under conditions which previously had been possible only by making use of tetraethyl lead. The engine was shown at a meeting of the Academy of Sciences. The alterations affect the surface of the piston, which shows a section characterized by a series of steps, the device being known as the "flight-of-steps" or "staircase" piston, from the characteristic design of its head. The piston is so placed in the cylinder that the sparking plug is opposite the center of the top step, which is grooved for this purpose, the groove being continued in the lower steps. The rate of combustion thus secured should, and indeed does, do away with knocking.

M. Dumanois has been studying this problem for a long time, and in February this year he strongly recommended the use of motor fuels so constituted as to minimize knocking. He told the Societe de Chimie Industrielle that "the means for avoiding 'knock' was likely to prove a mechanical one"; and the nature of the invention he had in mind has been disclosed during the past few weeks, and is illustrated above. "A long period," he remarked in February, "must elapse before motor design undergoes such an important change"; but meanwhile his piston is being widely discussed. The photograph was supplied by M. Dumanois. To its left is shown, for comparison, an ordinary piston for the same engine.



Modern Transportation Requires Athey Truss Wheels

Primeval man plodded through the mud with a pack on his back, or led a beast of burden. He expended much labor but accomplished little.

The American Indian lashed two long poles to his pony's back. He let the rear ends drag on the ground, and carried the load in the middle. This gave more capacity but developed much friction.

Then some ancient genius put round wheels under his freight and secured more efficient transportation. Although excellent on hard ground, round wheels bog down and mire in mud.

The 20th century manager carries his products on Athey Truss Wheels. They roll along on top of soft ground like a railway car on a highway of steel. They carry 30% to 50% more paying freight with 50% less tractive power.

Athey Truss Wheel Wagons are the modern, economical means for hauling capacity 10-ton loads over deep mud, sand, bad roads or no roads at all—WHERE OTHER EQUIPMENT *CANNOT* WORK. The complete story is told in our new literature. It will pay you to send for it today.

"They Bridge the Soft Spots"

ATHEY TRUSS WHEEL COMPANY
130 No. Wells Street, Chicago, U. S. A.
Cable Address: "Trusswheel, Chicago"

The Baldwin Locomotive Works, Foreign Representatives,
Philadelphia, Pa.

ATHEY TRUSS WHEEL WAGON
IT BRIDGES THE SOFT SPOTS

ANNOUNCING

The completion of our new Lubricating Refinery at Fort Worth, which began operation July 1, 1926.

CRUDE — Pure, uncontaminated *Ranger Crude* from our own wells; the unexcelled lubricating crude of the Mid-Continent Fields.

EQUIPMENT — The last word in stills, fractionating towers, Clay Treating Plant, Contact Filtering, Refrigeration and Sharples Super-Centrifuges.

CAPACITY — Our Filter Plant and Sharples Dewaxing Plant is one of the largest installations of this kind.

PRODUCTS — Long Residuum (Low Cold Test Motor Blend) Motor Oils (Medium, Heavy and Extra Heavy) Bright Stocks. All Low Cold Test, Filtered.

QUALITY — Flash, Fire Test, Carbon Residue, Color and lubricating value equal to the best grades obtained from Pennsylvania Crudes.

Write or Wire Us for Specifications and Prices

TEXAS PACIFIC COAL AND OIL COMPANY
Fort Worth, Texas

RIGHTS AND LIABILITIES OF JOINT OWNERS OF LEASE

By Lawrence Mills

Two or more persons, who own an undivided interest in an oil and gas lease, or other real or personal property, are what are known, in law, as tenants in common. Unless by joint operation a mining partnership is formed, as hereafter explained, neither is the partner, nor agent, of the other in any respect. The interest of each is as distinct and separate as if it were a whole instead of a fraction. One tenant in common cannot bind the other by declaration or deed. He cannot sell, or contract the sale, of the other's interest; consequently the sale of the lease as a whole, necessitates, not only the consent of everyone who owns an interest, but his signature to the assignment, unless he has authorized some one to act for him, by power of attorney. Nor can one tenant in common surrender, or forfeit, the lease to the lessor, or in any manner, affect the interest of the other.

But while the ownership is distinct, the right to the possession and use of the thing is held in common. Each is entitled to the full enjoyment and benefit exactly as if he owned it in severalty, subject, of course, to the same right in each of the other owners. From this common right of possession, has developed a principle of law that one tenant in common will not be permitted to acquire any right or title, adverse to his co-tenant. If he does, he will be presumed to have acquired it for the common benefit of himself and his co-tenant, who is entitled to share the acquisition, upon contributing his proportion of the cost.

Lease an Entirety

A lease, so far as the payment of rentals is concerned, is an entirety, and the lessor is not required to accept less than the whole sum due. Consequently, one joint-owner may be compelled to pay the rental upon the interest of the other, in order to save his interest from forfeiture. By so doing, he does not acquire the interest of such defaulting party. His interest has been protected, along with his own.

Another aspect of the same legal proposition is presented, when it becomes necessary for the owners of the lease to drill a well, in order to hold the lease, under the "thereafter" clause, or to protect the land from drainage. One, or more, owners of undivided interests may refuse to contribute towards the cost of the well, which is drilled at the expense of the others. Nevertheless, if the lease is preserved as the result of the drilling of the well, its benefits accrue to those who have not contributed, as fully as to those who have. Their right to participate in the production of the well, I shall discuss later.

From what has been said, and will hereafter appear, it is seen that the ownership of a small undivided interest in a lease furnishes a wonderful opportunity for one, who is mean, or unscrupulous, enough to do it, to take a free ride, at the expense of his associates. Nor is there any way, short of partition, to get rid of the incubus. He cannot be compelled, either to buy the interests of his associates, or to sell his interest to them. He may decline both propositions and be within his legal rights. The only remedy the law affords against him is by a suit for a division of the lease, called in law, a partition.

Rights in Division

If all the joint-owners agree upon a division, the lease, whether a wildcat or a producing one, may be divided among them, upon an acreage, or other basis, in accordance with their agreement. The simplest way to do this, is for all, except the one to whom the particular tract has been allotted, to join in an assignment to him. If, however, they cannot agree upon a division, the only remedy is by suit. If the lease is a producing one, or there is a strong probability that it, or a part of it, will be productive, the great weight of authority holds that the court can make no physical division of it between the several owners; that it is empowered only to sell the entire lease and divide the proceeds. This holding is predicated upon the proposition that partition implies equality, and the court, having no way of knowing what part of the land will produce, or in what amount, a division by metes and bounds may result in the utmost inequality in the value of the shares falling to the respective owners. If, however, the lease is in wildcat territory, or there is no substantial reason for believing that it will be productive, the court may decree a physical partition of it, upon an acreage basis. But, whether the lease is subject to partition, by metes and bounds, or by sale and division of the proceeds, any tenant in common, however small his interest, is entitled, as an absolute right, to a partition upon the one basis, or the other.

One tenant in common of land has the right to the full possession and enjoyment of it, subject only to a like right in each of the other co-tenants. Neither has the exclusive right to the possession of any part of it, because that would be a denial of the rights of the others to the part exclusively appropriated. For the same reason, one tenant in common cannot build a house upon, or fence any part of, the land for his private and individual use.

Use of the Land

The use of the land to which each co-tenant is entitled extends only to the usual and customary manner of enjoying it. In the absence of previous dedication to that purpose, one joint-owner would have no right to open a mine, or drill a well, upon the land and remove the minerals, because the removal of the minerals involves, not the use, but the destruction of the estate. But a co-tenant of a mine, or a mineral right, may remove the minerals to the point of exhaustion. Likewise, in the case of an oil and gas lease, one joint-owner would have the right, even in opposition to the wishes of the other joint-owners, to drill one, or more, wells at any point upon the leased premises. This for the reason that, from the nature of the property, the only use of which it is susceptible is the production of oil and gas in accordance with its terms, and this can be accomplished only by drilling wells for that purpose.

One, or any number of the joint-owners of the lease, may go upon the leased premises, drill any number of wells thereon, and produce and sell any oil or gas

(Continued on Page 108)

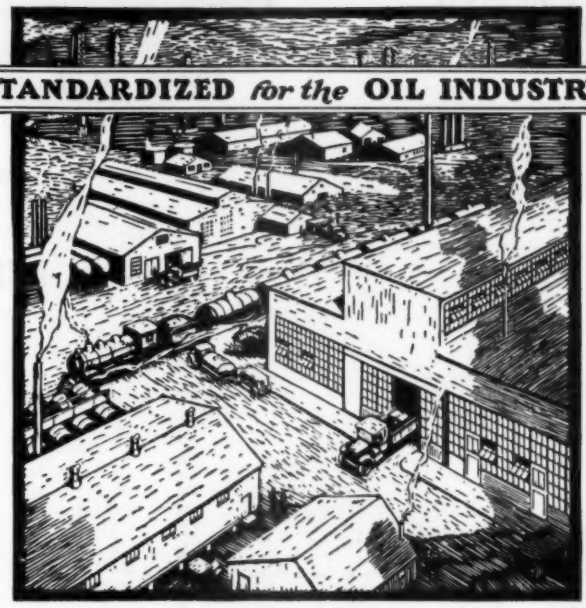
LEGAL SUBJECTS OF GENERAL INTEREST

Mr. Mills is a practicing lawyer of Tulsa, having recently moved here from Oklahoma City. He has specialized in the subjects of Indian land law and oil and gas. His book, "Oklahoma Indian Land Law," has long been a recognized authority upon the subject. He is also the author of the "Law of Oil and Gas," which has recently been published by Callaghan & Co. of Chicago. Mr. Mills has agreed to contribute a series of articles upon different phases of the law of oil and gas, which will appear in The Oil and Gas Journal from time to time.

TRUSCON STEEL CO.

TRUSCON COPPER STEEL BUILDINGS

STANDARDIZED *for the* OIL INDUSTRY



Permanent Features

1. Lowest Cost of any Permanent Building.
2. Minimum Cost of Upkeep.
3. Enduring Copper Steel Construction.
4. Safe from Fire, Lightning, Rust.
5. Designed specially to meet Your Needs.
6. Delivery When You Want It.
7. Erection in half the time usually required for permanent construction.
8. One Source for your Entire Building.
9. No delays—no extras—original estimate covers all.

Roofs of Security

Truscon Ferrodeck or I-Plate roofs are two types of steel-deck roof constructions that answer every need for straight-away roofs on all kinds of buildings. Light weight, durable, fire and rust resistant, insulated to any degree.

Classified Catalog for Oil Industry will be mailed free on return of the coupon.

TRUSCON STEEL COMPANY, Youngstown, Ohio

Stocked by Dealers in all Principal Cities

TRUSCON STEEL COMPANY,
Youngstown, Ohio.

Please send me your Truscon Building Catalog classified for the Oil Industry.

I am interested in a building for .....

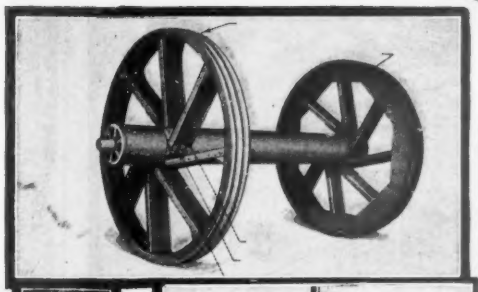
.....

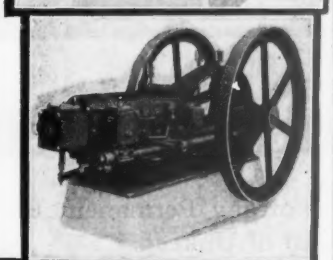
Name .....

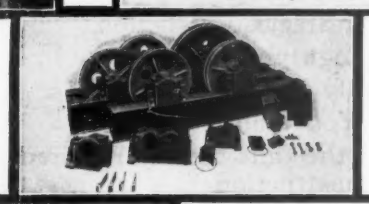
Address .....

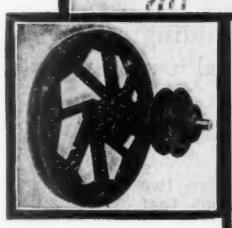
O&GJ7-22-26

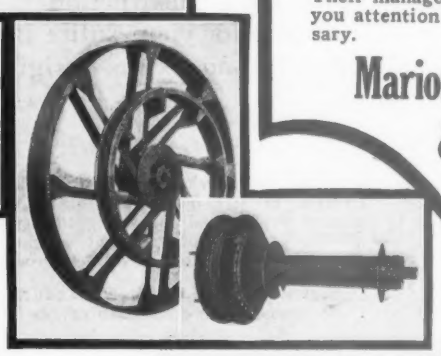
WHERE EVER there is oil
THE MARION LINE
of OILWELL MACHINERY gets it to the surface at less cost











BULL WHEELS—BULLETINS—BOYS

Besides the Marion Steel Bull Wheels, we manufacture a complete line of Metal Drilling and Pumping Equipment. We also furnish wood equipment when desired. In order that oil men may have for their files, information concerning the MARION LINE of better oil well machinery, we have the following Bulletins, which will be sent free on request:

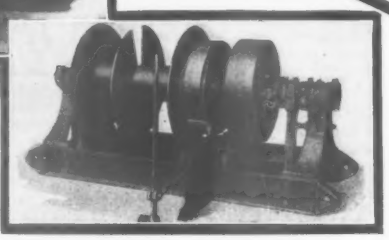
Bulletin No. 198—Steel Bull Wheels
Bulletin No. 199—Steel Derricks
Bulletin No. 200—Irish Pulling Machines.
Bulletin No. 202—Marion Peerless Reversible Clutch
Bulletin No. 203—Marion Gas Engines
Bulletin No. 205—Marion Band Wheel Power
Bulletin No. 206—Sand Proof Working Barrel
Bulletin No. 214—Hi-Test Sucker Rods
Bulletin No. 217—Marionhill Pitmans
Bulletin No. 219—Marion Standard Rig Irons
Bulletin No. 228—Marion Metal Buildings
Bulletin No. 232—Miscellaneous Pumping Equipment

Kindly fill in coupon in lower left hand corner and mail to nearest branch or home office. That you may have as complete service as possible, Factory Branches are located in

Bradford, Pa.
Scottdale, Pa.
Tulsa, Okla.
Drumright, Okla.
Okemah, Okla.
Bristow, Okla.
Wilson, Okla.
Tonkawa, Okla.
Burkburnett, Texas
Breckenridge, Texas
Ranger, Texas
Panhandle, Texas
El Dorado, Ark.
Olney, Texas
Eureka, Kansas
Dallas, Texas
Moran, Texas
Luling, Texas
Salt Creek, Wyoming
Smackover, Ark.
Long Beach, Calif.

Their managers and assistants are ready to give you attention twenty-four hours a day if necessary.

Marion Machine, Foundry & Supply Co.
Marion, Indiana



THE MARION LINE

MARION MACHINE, FOUNDRY & SUPPLY CO., Marion, Indiana

Gentlemen:

We are interested in the following Bulletins, which please send us:

.....
.....
.....
.....
.....

Name.....
City.....
State .....

HERBERT E. WILLIAMS
Geologist and Valuation Engineer
Tuloma Building
TULSA, OKLAHOMA
Phone 3-5091

BROKAW, DIXON, GARNER & McKEE
GEOLOGISTS
PETROLEUM ENGINEERS
Examinations, Appraisals
Estimates of Oil Reserves
120 Broadway New York City
Caracas, Venezuela

Amil A. Anderson P. W. Anderson
ANDERSON & ANDERSON
Mining Engineers and Petroleum Geologists
721-722 Union Nat'l Bank Bldg.
Wichita, Kansas
Telephone Market 2887

G. W. EARNSHAW
LAWYER AND SOLICITOR
U. S. and Foreign Patents
Phone 2-6479
TULSA, OKLAHOMA
107 Tuloma Building

H. H. HOOD
PETROLEUM ENGINEER AND GEOLOGIST
Explorations, Surveys, Appraisals, Audits, Consultations, Management
Suite 1582 Arcade Bldg.,
St. Louis, Mo.

Frank A. Herald John M. Herald
HERALD BROTHERS
GEOLOGISTS
PETROLEUM ENGINEERS
303 Cosden Bldg. Phone 3-8711
TULSA, OKLAHOMA

DEWITT T. RING
PETROLEUM GEOLOGIST
Armstrong Bldg.
El Dorado, Ark.

ROBERT W. CLARK
CONSULTING GEOLOGIST AND APPRAISER
Depletion and Reserves for Income Tax
217 Commerce Bldg.
OKMULGEE, OKLA.

HARRY F. WRIGHT
Geologist - Engineer
Examination, Appraisal, Development Petroleum and Natural Gas
206 So. Cheyenne, Tulsa, Okla.

W. L. GOMORY
CHEMICAL ENGINEER
Consulting Petroleum Technologist
INVENTOR GOMORY CRACKING PROCESS
Licenses Solicited
Refinery Design
Peoples Gas Building Chicago

PHILLIP MAVERICK
PETROLEUM GEOLOGIST
Telephone 93
Ricker & Dodson Bldg.
SAN ANGELO, TEXAS

MARTIN VAN COUVERING
Petroleum Engineer
Formerly Petroleum Engineer California State Mining Bureau
Management of properties, engineering supervision, special reports.
Suite 814 Petroleum Securities Bldg., Los Angeles, Cal.
Telephone: TRinity 8171

"Deeper Drilling" Again the Slogan In the Gulf Coast

By P. L. McGreal.

HOUSTON, Tex., July 17.—"Deeper drilling" is again the slogan in the Gulf Coast region and as a consequence it is probable that the next year will see wells drilled to 6,000 feet or lower around the present older producing saline domes. The major companies are leasing or buying in fee simple acreage far out from production at such pools as Humble, Damon Mound, Batson, Saratoga and such old known, but non-producing domes as Stratton Ridge in Brazoria county; Davis Hill in Liberty county and others.

This accumulating of acreage is being done quietly but effectively by the Gulf Production, Humble Oil & Refg. Co., The Texas Co., Sun Oil Co. and Rycade Petroleum Corporation.

Several reasons are responsible for this activity. The success of the Yount-Lee Oil Co. in finding deeper productive sands off the southeast and the west sides of the Spindletop dome is one. That company recently duplicated its deep sand success on the southwest side of the Sour Lake pool and the Humphreys Corporation got a deep sand well there last week. During the past three years much attention has been given to geophysical explorations by means of the seismograph, or "dynamiter" as it is called, and the torsional balance. Millions of acres have been thus explored at a heavy cost, but the results have been disappointing from the standpoint of new pools around new saline domes. However, they have added materially to the geological knowledge of the Coastal Plains belt.

The slogan is not new. It was first used at Sour Lake in 1913 and opened the deep sands there at from 2,400 to 2,650 feet. Previous to that time the bulk of the production in that pool came from shallow depths from 600 to 1,100 feet. The same slogan found expression in the Humble pool in 1914 and opened the deep sand section on the east side at from 2,800 to 3,000 feet. The Goose Creek pool was the next to be tested for deep sands, with unusually great success. Productive sands were found there all the way from 2,200 to 4,650 feet.

The whole theory of operating in the Coastal region is undergoing a decided change. It is due to the modern methods of extracting gasoline by means of the cracking process. A few years ago high gravity crude in the Coastal region was considered out of place and of merely nominal value. It ranked as fit only for gas oil. Consequently an operator with a well producing light gravity oil was considered "out of luck." Other operators evaded the territory. The pool was condemned. Now, conditions are different. The light gravity crudes are graded on a gravity basis and are in demand. It is believed deeper drilling, out from the present producing area, will yield a high grade crude, if any is found. The deep sand oil at both Spindletop and Sour Lake is higher than the usual Coastal grade. Now, most of the production is found within a radius of 2,000 feet of the dome. Much of the acreage being acquired is from three-fourths of a mile to one mile away, which upsets the old theory.

At Humble, the Gulf Co. is taking acreage far out on the east and west sides of the present area. D. J. Harrison, a prominent operator, has taken up leases and fee land east and south of Stratton Ridge. Also on the south side of Damon Mound Dome. The Humble Oil & Refining Co. and The Texas Company have been buying acreage in fee around Davis Hill, another old saline dome in the northern part of Liberty County.

In Matagorda County, the Gulf company is starting a test on a new dome at Van Vleck and the Humble Oil & Refining Co. one at Lindale. The Rycade corporation is rigging on the Carson Survey in the same county.

The proposed campaign for deeper sands in the coastal region means im-

EST. 1830
WALL
WALK LAID
ROPE
TRADE MARK

"Drill With Manila"

Wall Manila Drilling Cables

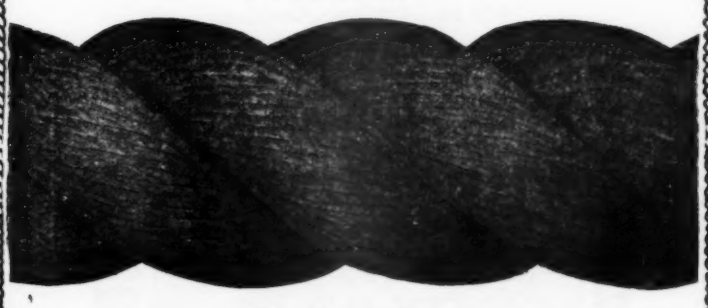
So you'll know:

Sold by

Artesia Supply Company—New Mexico
The Bovaird Supply Company—Oklahoma, Kansas and Texas
Bovaird & Company—Bradford, Pa.
The Bridgeport Machine Company—Oklahoma, Kansas and Texas
Decker Tool & Supply Company—Texas
The Drillers Supply Company—Kansas
Great Northern Tool & Supply—Montana
Hinderliter Tool Company—Oklahoma, Kansas and Texas
Murray Tool & Supply Company—Oklahoma, Kansas and Texas
New Martinsville Supply Company—New Martinsville, W. Va.
Petroleum Specialties Company—Montana and Wyoming
Republic Supply Company—Oklahoma and Texas
Rope & Cordage Company—Parkersburg, W. Va.
Southwest Supply Company
The Staves Supply Company—Kansas
Wagner Supply Company—Texas
Western Supply Company—Oklahoma, Texas
Western Drilling Tool & Supply Company—Kansas

WALL ROPE WORKS, INC.
Established 1830
General Offices: 48 South Street, New York City
Factory: Beverly, New Jersey
Oil Field Branch: Bartlesville, Okla.
Stocks throughout the oil fields

Pure Manila Bull Ropes
(Walk Laid)



Worthy of Trust

Davis Strainers Save Otherwise Wasted Labor

A DAVIS Strainer in the gas line ahead of every meter and pressure regulator protects these automatic devices from dirt, scale, water, and other foreign substances, and saves hundreds of hours of labor plus the cost of the interrupted service.

The Davis Strainer is made for this particular service. Its simplicity is an outstanding feature of the design, yet no other strainer is equal in effectiveness. Screens of brass, iron, or monel can be furnished to meet any particular requirements.

Sediment and dirt are quickly removed by opening the stop valve, or, by removing the bolted flange, the entire screen may be removed for cleaning.

Davis Strainers are moderate in price, and they save their cost several times over in a short period of service. Made in all sizes from ½ inch to 20 inches.

Send for the Davis catalog with full descriptions.

THE G. M. DAVIS REGULATOR CO.
409 Milwaukee Avenue
Chicago, Illinois

Westcott & Greis, Inc., Sales Engineers
Tulsa—Los Angeles—Dallas

Valve Makers for Over Fifty Years

DAVIS VALVE
STEAM SAVERS SINCE 1875
SPECIALTIES

OGJ7-22Gray

proved drilling equipment, such as heavier rigs and drill pipe. The supply companies and pipe mills will meet the new requirements when the demand warrants. It may not be necessary to drill as deep as the geological sharps predict.

RIGHTS AND LIABILITIES OF JOINT LEASE OWNERS

(Continued from Page 105)

found. But the drilling of the well is exclusively the venture of those who embark upon it. They must bear the entire loss in case of a dry hole. For the reason that there is no agency between tenants in common, they cannot charge one not joining them with any part of the cost. Nor is his interest subject to materialmen's, or laborer's lien, or other charge, growing out of the entierprise to which he was not a party. Those performing labor, or furnishing material, must look only to the interests of those joint-owners who participated in the undertaking.

Share in Production

But, while the one not joining is not chargeable with any part of the cost, in case the well is a failure, he is entitled to share equally with those who put up the money for its drilling, in the event production is secured. It is another case where he gets a free ride at the expense of his associates. If oil or gas is found, the one not joining has the choice of two courses that he may pursue. He may pay, or tender, to the others his part of the cost of the well, and be admitted to a full participation in the production, to the extent of his interest in the lease. If he does not desire, or is unable, to pay his part in cash, he may discharge his obligation to them by permitting them to collect the proceeds from his part of the runs, until they have been reimbursed for the amount they spent in his behalf.

His other remedy is to sue his cotenants for conversion of his part of the oil or gas produced and sold. In Pennsylvania, Kentucky, and probably West Virginia, the damages for conversion, by co-tenants, is measured by the customary royalty, paid in the community to the lessor, for the privilege of producing, namely, one-eighth. In the Mid-Continent Field, however, he is entitled to recover the value of the oil converted; but it is the value of the oil in the ground, not at the mouth of the well, or in the tanks. This value is determined by the value at the surface, less the cost of producing it.

Whether he elects to share the production by paying his part of the cost, or demands an accounting for the conversion of the oil, except in those states where he is entitled only to royalty, he is charged with the cost of the operations, as a whole. He cannot elect to participate in the profits of the paying wells, and decline the loss upon the unprofitable ones. The cost with which he is chargeable, is the reasonable cost of drilling and equipping the wells and operating the lease; and such expense will include reasonable and necessary overhead and supervision charges. When the operations shall have made a profit, over and above such expenses, he is entitled to share it to the extent of his interest in the lease.

Pooling of Interests

We have been considering the rights of one or more co-owners, where it was impossible to secure the co-operation of all the management of the lease. But, in many cases, the interests are pooled and the lease operated as a unit, with the agreement of each to contribute his part of the cost in proportion to his interest. It will be necessary to consider the liability of each co-owner, under such circumstances.

A mining partnership is a peculiar form of partnership that evolved in the western states in connection with the mining of solid minerals. It differs from all other associations, in the nature of a partnership, in that it arises only between co-tenants. An ordinary partnership can result only from the agreement, expressed or implied, to sustain the rela-

GEO. C. MATSON
GEOLOGIST
2-2049—Phones—2-1833
408 Cosden Bldg., Tulsa, Okla.

F. JULIUS FOHS
OIL GEOLOGIST
Mason Bldg., Houston, Texas
818 Kennedy Bldg., Tulsa, Okla.
51 E. 42nd St., New York
Cables: Fohsoil
Codes: Bentley & McNeil
No Outside Work Done.

JOHN B. KERR
PETROLEUM GEOLOGIST
Phone Garfield 4734
601 BALBOA BLDG.
SAN FRANCISCO, CALIF.

WALTER STALDER
OIL GEOLOGIST
Crocker Bldg.
SAN FRANCISCO, CALIF.

V. H. McNUTT
Consulting Geologist and Appraiser
409 Security National Bank Bldg.
Tulsa, Okla.

E. J. LONGYEAR CO.
MINING ENGINEERS AND GEOLOGISTS
Diamond Core Drill Manufacturers
Diamond Drilling Contractors
MINNEAPOLIS, MINN.

EDWIN B. HOPKINS
CONSULTING GEOLOGIST
25 Broadway
NEW YORK

Cables: Ceallach, New York
Telephone: Whitehall 8256
JOHN EOGHAN KELLY
Consulting Engineer
17 Battery Place, New York City, N.Y.
Examination, appraisal, management, negotiation of petroleum properties, mines, natural resources. Exceptional facilities in Latin America.

RANNEY OIL MINING COMPANY
LEO RANNEY, President
Oil Mine Engineers
26 Broadway
New York City

Wilbur E. Brown G. Thomsen, Jr.
BROWN & THOMSEN
GEOLOGISTS
419 West Grand Ave.
OKLAHOMA CITY, OKLA.

H. H. MESSIMER
Tank Gauging Engineer
MACHINE MADE TANK TABLES
ABSOLUTE ACCURACY
P. O. Box 257 104 Mid-Co Bldg.
Phone 2-4909—Tulsa, Okla.

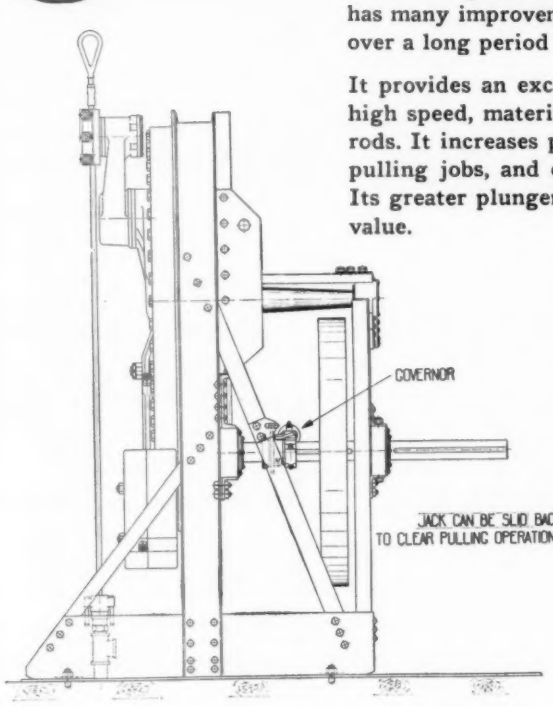
Robert H. Wood Virgil O. Wood
WOOD & WOOD
GEOLOGISTS AND PETROLEUM ENGINEERS
Phone 2-1725
302 Commercial Bldg.
TULSA, OKLA.

"The new long stroke pumping action of the D&B Simplex Pumping Jack stops high speed troubles and increases production"

THE NEW D-B SIMPLEX PUMPING JACK

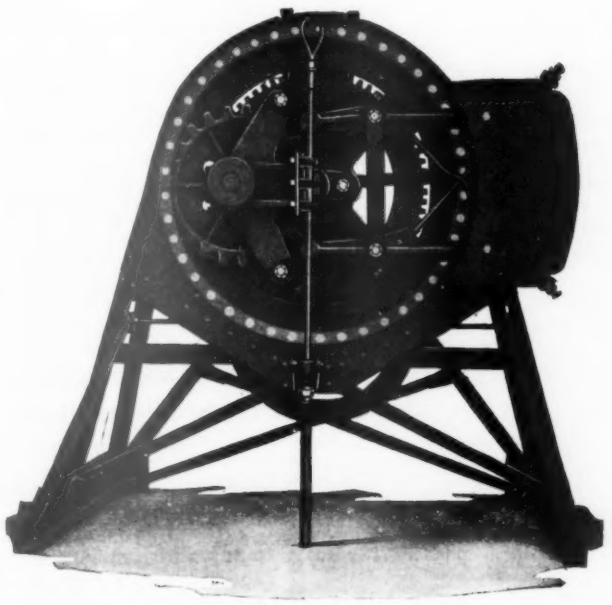
This new, perfected D&B Pumping Jack is a big improvement over ordinary types. It has many improvements which are entirely new, but proved practical in actual service over a long period of time.

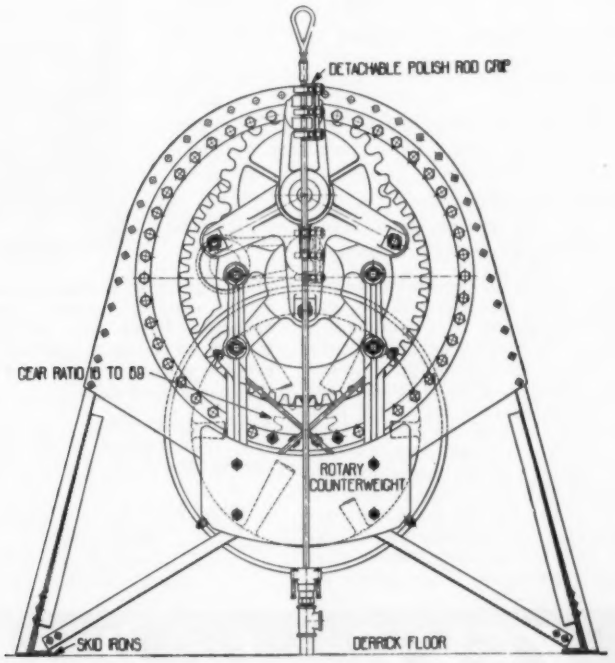
It provides an exceptionally easy, smooth motion to the sucker rods on long stroke at high speed, materially reducing the whipping and vibration and increasing the life of the rods. It increases production when the fluid is there, minimizes the frequency and cost of pulling jobs, and operates more economically than any other type of jack yet developed. Its greater plunger travel and ease of operation are decided improvements of inestimable value.



The D&B Jack is approximately 10'6" high and provides a straight line travel of 6'1⅝" for the polish rod, with a maximum speed of 25 strokes per minute, giving 150' of plunger travel per minute as compared with 75' for the walking beam type. All bearings are heavy duty ball bearings of enormous capacity, packed in grease so that lubrication is only required about once every six months. The frame is of fabricated structural steel; the gears are all of steel. Can be direct connected to electric motor with a reduction gear, or driven from the calf wheel sprocket at any desired speed. Also can be used in connection with a gas or steam engine. Our new folder fully describes and illustrates. Send for a copy.

D&B PUMP & SUPPLY CO.
301 WEST AVENUE 26 LOS ANGELES, CALIF. ~ DALLAS, TEXAS
BRANCH STORES: COALINGA, BAKERSFIELD, TAFT, TORRANCE, SIGNAL HILL & SANTA FE SPRINGS, CALIF.





METERS

For Measuring Production and Distribution of

Oil
Gasoline
Gas
and Other Fluids

PITTSBURGH METER COMPANY
General Offices and Works:
7800 Susquehanna St., PITTSBURGH, Pa.

SALES OFFICES:

New York—50 Church St.
Chicago—612 North Michigan Ave.
Kansas City—Mutual Bldg.
Columbia, S. C.—1433 Main St.
Seattle, Washington.
Los Angeles—Union Bank Bldg.

The One Sure Way To Stop Joint Leaks

Makes joints 100% tight — absolutely leakproof where all other methods fail.

Throughout the oil industry this non-corrosive, greaseless compound is being used to end all trouble from leaky joints. Wherever used it meets with overwhelming endorsement. Users claim it is invaluable around the cracking plant, where it is most difficult to keep hot oil under pressure from leaking and causing excessive smoke.

Due to its scientific preparation and graphite base, this paste is oil, acid and gasoline proof. It is soluble only in water. Of paste-like consistency, it is easily spread on pipe joints, fittings, flanges, flange unions, and every place where a leakproof joint is desired. It expands under heat, filling every crack and crevice—then carbonizes. It renders joints not only leakproof but easy to take apart if desired. Also proven invaluable for use on manhead gaskets on storage tanks, and for painting seams after making repairs to stills. Often replaces gaskets on rough joints. Positively seals all ground joints. Key Graphite Paste was originally designed to correct the oil leakage around pressure stills, and for this purpose has no equal.

Key Graphite Paste is put up in barrels, half barrels, 60-lb. and 30-lb. drums, and 1, 3, 5 and 10-lb. cans.

KEY BOILER EQUIPMENT COMPANY
27th and McCasland
East St. Louis, Ill.

KEY Graphite Paste

tion of partners to each other. But a mining partnership is not based upon an agreement to form a partnership. It arises from the relation of the parties, and in spite of an express agreement to the contrary, when two or more co-tenants unite and co-operate in the development and operation of a mine. It arises only when the co-owners actually begin operating, and ceases when the operations are completed or abandoned. Unlike an ordinary partnership, the death of a member, or the sale of his interest, does not dissolve the partnership. Upon the sale of one's interest, he ceases to be a member, and the purchaser becomes a member in his place. Nor have the other members anything to say about who shall be permitted to buy the interest of the retiring member. He may sell to whom he pleases, and the purchaser automatically becomes one of the partners.

Mining Partnerships

Pennsylvania and Ohio have declined to extend the rule of mining partnerships to operations for oil and gas, but all the states in the Mid-Continent area have held it applicable to oil and gas. In those states, when co-owners of a lease undertake to drill a well, or operate a lease, each to contribute to the cost in proportion to his interest, they become mining partners. Although they may expressly agree that each shall be responsible only for his part of the expense, as to third parties, each is liable for the entire cost of the operation. If one is required to pay more than his share towards the cost of the common enterprise, he has a claim against, and a lien upon the interest of, him who has paid less than his share, for the excess, but, if the well is dry, or the operation a failure, his recovery from such a source is, in most cases, nominal. He will usually be required to pocket his loss, with no recompense, save experience.

It is difficult to conceive of a form of ownership of an oil and gas property that is as poorly adapted to the nature of the business as the ownership in common with several other persons. Aside from the drawbacks heretofore mentioned, there is the fundamental objection to the impossibility of quick disposition. The value of a lease is subject to violent fluctuations. One who would reap the benefits of a favorable opportunity, must be in a position to act promptly. But this celerity of action is impossible when a decision depends upon the concurrence of several parties. Some will want to sell. Others will be disposed to await a better price, while still others will favor holding it for production. Before an agreement is reached, between the several owners, upon the subject, the favorable opportunity is often lost.

Notwithstanding the many objections that may be urged against this form of ownership, many leases continue to be held in common. There is but one explanation of this popularity. It lies in that trait of human nature that craves fellowship in adventure. We will all face danger, or incur a risk, in company with our friends, that we would shrink from meeting alone.

SPEECHLEY SAND WELL BEING CLEANED OUT

(Continued from Page 65)

to get the flames under control as may be imagined. The pressure, estimated to have been 700 pounds, was not materially lessened.

Just to remind readers of that old saying "there is nothing new under the sun," it is recalled that it was in Fredonia, N. Y., according to history, where natural gas was first used for illuminating purposes. Bubbles were discovered coming from the bottom of a mill pond and a well 1½ inches in diameter was bored to the shallow gas sand, developing a total pressure of 88 cubic feet in the ensuing 12 hours. From the best information obtainable at this late day, the users were not bothered with erratic changes in the pressure and the lights

ARTHUR C. BROWN
SOLICITOR OF UNITED STATES AND FOREIGN PATENTS
406-412 KENNEDY BLDG., Tulsa, Okla.
Mr. Ferd Krueger in Charge
Phone 4.2319

JOHN L. RICH
PETROLEUM GEOLOGIST
OTTAWA, KANSAS

L. G. Huntley Stirling Huntley
HUNTLEY & HUNTLEY
PETROLEUM GEOLOGISTS AND ENGINEERS
Frick Building PITTSBURGH, PA.

FREDERICK G. CLAPP
Consulting Geologist and Petroleum Engineer
50 Church St., New York City

F. B. Porter, B. S., Ch. E., President
R. H. Fash, B. S., Vice President
THE FORT WORTH LABORATORIES
Field gas testing. Analyses of oil field brines, gas, minerals and oil
828½ Monroe St., Fort Worth, Texas

CARL B. ANDERSON
GEOLOGIST AND PETROLEUM ENGINEER
804 Kennedy Bldg.,
TULSA, OKLA.

CHARLES T. KIRK
JAMES E. HOOVER
CONSULTING GEOLOGISTS
Tulsa, Oklahoma
Phone 2-2821 329 Atco Bldg.

Appraisals Investigations
SAMUEL J. CAUDILL
PETROLEUM ENGINEERS
TAX COUNSELLORS
Tulsa Los Angeles
1014 Atlas Bldg. 433 Security Bldg.

TEXAS OIL MAPS
County and District
Catalog on Application
HEYDRICK MAPPING COMPANY
Wichita Falls, Texas

PATENTS
Write for free book
MUNN & CO.
Associated since 1846 with the Scientific American
1551 Scientific American Building, New York City
514 Scientific American Bldg., Washington, D. C.
1703 Tower Building, Chicago, Ill.
656 Hobart Building, San Francisco, Cal.
511 Van Nuys Building, Los Angeles, Cal.

Northern Oil Information Bureau
Shelby, Montana
Complete weekly drilling and operating report of Kevin-Sunburst field mailed to any address, $10 for four reports. Maps and logs for sale. Best of references.
We maintain geological, land and field departments, all in expert hands.

A shield against the thirsty sun

Storage tanks painted with white-lead reflect the sun's rays and cut evaporation losses

EVERY day the thirsty sun takes away many gallons of oil through evaporation. During a year this loss amounts to thousands of dollars.

To find out how to reduce this loss, the U. S. Bureau of Mines investigated. After many tests they made their report. "Some of this evaporation is unavoidable," they said, "but by painting tanks in white or light colors that reflect the heat the loss of oil may be considerably reduced. Tanks painted in light colors keep oil from 8 to 10 degrees cooler than do tanks painted in dark colors."

As a result of this report and other tests, there is a pronounced tendency in the oil industry today towards white and light-colored tanks. And more and more it is becoming the practice to use Dutch Boy white-lead for finishing coats over an undercoating of red-lead.

An ideal finishing coat

Dutch Boy white-lead has the necessary whiteness to make it an ideal paint for finishing coats. Moreover, it can be tinted to any desired light color. In addition it gives added protection to that already provided by the red-lead undercoating.

An undercoating of pure red-lead, such as Dutch Boy red-lead, is generally accepted throughout the industry as the best protection for metal surfaces.

Next-to-metal coats of Dutch Boy red-lead and finishing coats of Dutch Boy white-lead make a combination which effectively protects the metal surface against air and moisture—the chief causes of corrosion. And this combination cuts evaporation losses to a minimum.

We maintain a Department of Technical Service, conducted by paint specialists who have made a study of paint for protecting metal in the oil industry. They will be glad to consider your particular paint problems.

Write them in care of our nearest branch.

For oil-refining you want litharge of correct physical character and extreme chemical purity. Such litharge is made by the makers of Dutch Boy red-lead and Dutch Boy white-lead. At all times you can rely on its unvarying uniformity. Our nearest warehouse can give you quick shipment in any quantity you desire

NATIONAL LEAD COMPANY

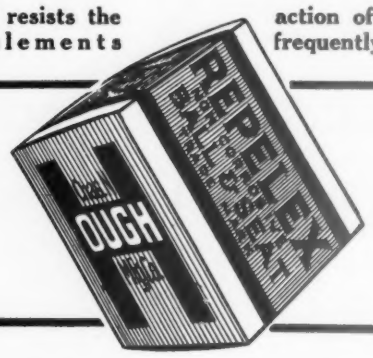
New York, 111 Broadway — Boston, 131 State St.
Buffalo, 116 Oak St. — Chicago, 900 West 18th St.
Cincinnati, 659 Freeman Ave. — Cleveland, 820 West Superior Ave.
St. Louis, 722 Chestnut St. — San Francisco, 485 California St.
Pittsburgh, National Lead & Oil Co. of Pa., 316 Fourth Ave.
Philadelphia, John T. Lewis & Bros. Co., 437 Chestnut St.

DUTCH BOY WHITE-LEAD

NON CORROSIVE!

REPELEX resists the corrosive elements action of acid and other frequently so troublesome

TEST IT



TEST IT

REPELEX, packed in a brown box with a black and gold label, is our answer to the flood of requests for a non corrosive ball and seat that would wear as long and as efficiently as STEELEX and BRONZEX under specific circumstances. If you operate one or a thousand wells where excessive acid or other strong elements are destroying the efficiency of the balls and seats you have been using, we urge you to switch to REPELEX—your dealer carries them in stock.

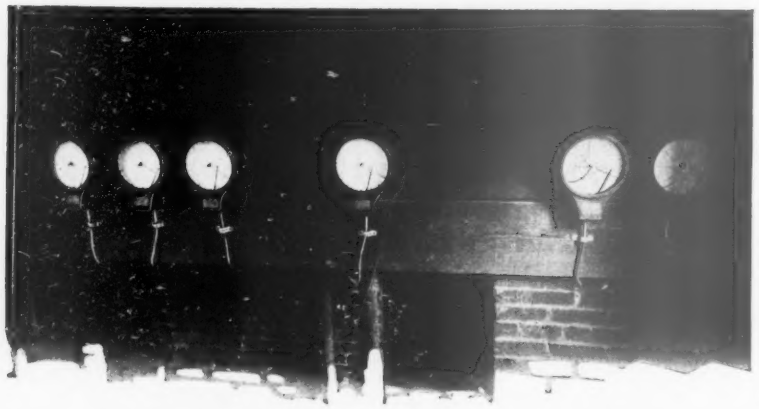
Why not test one?

THE CHARLES N. HOUGH MANUFACTURING CO.
Franklin, Pennsylvania

W. TARKINGTON
Sales Representative
1724 Ruth Street
Houston, Texas

C. O. SHUMAKER
Sales Representative
1143 S. Xanthus Street
Tulsa, Oklahoma

Products that cut down your underground overhead



SENTINELS OF PROFIT

Guarding against faulty processing, against costly guesswork, Bristol Recording Instruments save many times their cost in a short period.

They tell the truth at a glance, in all matters of pressure, heat and fluid measurement. They put refinery processes under strict control, insuring a uniform product at all times.

And they do not know failure. Bristol Instruments are built with the staying powers to set at naught the stresses of hard refinery service.

Bristol engineers will be glad to show you as they have many other refiners, how to meet competition with lower costs, through correct control of refinery operations.

BRISTOL'S

The most extensive line of Recording Instruments, including Recorders for Pressure, Liquid Level, Temperature, Electricity, Motion, Speed, Humidity, etc. Ask for Bristol's Catalog.

When at the Sesqui-Centennial Exposition in Philadelphia, do not fail to visit our booth.

The Bristol Company *Waterbury, Connecticut*

FOR 36 YEARS — Ask Any Technical Engineer — MAKERS OF

BRISTOL'S RECORDING INSTRUMENTS

proved to be a success until this early gas sand was exhausted.

Open Oil Pool

In 1886 Taylor & Torrey, Oil City men, drilled a well to try for a new oil bearing sand leading from that giving off the gas which also contained more than a "symptom" of crude. This test well proved to be of the oil gusher class and opened up the famous Tarkill Pool. Mr. Torrey is just now having this No. 1 well cleaned out to increase production. The theory of Taylor & Torrey was that the dip from the gas sand was to the southwest and they leased large tracts of farming and timber land adjoining the McPherson farm. Their test was on the William Hill farm, 3 miles southwest of the Speechley wells. Good production from the third sand resulted and the oil men drilled others with more than surprising good fortune, their total production for six months, according to pipeline statements, being 2,680 bbls. One well came in flowing at the rate of 800 bbls. a day and not a well was drilled in the immense acreage of the firm that started at less than 15 bbls. a day. Drilling below the third sand they tapped the Speechley, and when one screw therein the pressure was great enough to blow the heavy drilling tools entirely out of the deep hole. This was on the William Hill farm. One peculiarity of the Tarkill oil sand was that in the 3½ miles, in a line on which the Taylor & Torrey wells were located, the greatest dip of the rock was only 10 feet to the mile.

ATLANTIC REFINING WINS SUPERIOR SUIT

PHILADELPHIA, Pa., July 17.—The United States Circuit Court of Appeals has set aside the $3,279,081 damage award to the minority stockholders of the Superior Oil Corp. against the Atlantic Refining Co., and ordered Judge Hugh M. Morris of the Federal District Court of Delaware, before whom the case was tried, to dismiss the suit.

At the same time the court overruled Judge Morris' decision invalidating a 10-year contract, dated from June, 1920, under which the Atlantic company was to purchase Superior's entire petroleum output. The decision by the Court of Appeals was unanimous.

Judge Morris had held that the Atlantic Refining Co., with the aid of Robert M. Catts, president of the Superior corporation, had fraudulently obtained 325,000 shares of no-par stock at $8 a share while it was being sold to others at $16 to $19. Judge Morris also had upheld the contention that the 10-year contract had been obtained by fraud.

The decision of the Court of Appeals, written by Judge Joseph Buffington, calls attention to the fact that the Superior majority stockholders were opposed to the suit against the Atlantic Refining; that the bankers' syndicate, which paid $16 a share for the stock, and the Old Dominion Oil Co., which turned over properties worth $5,000,000 to the Superior on the basis of $16 a share, were not complaining, and that of the more than 90,000 shares of stock issued by the Superior only 10,000 shares were represented in the minority suit.

In conclusion, Judge Buffington said the evidence did not support the charges that the Atlantic Refining had been involved in any fraud and that if Mr. Catts had manipulated the stock of the Superior corporation he had done so without the knowledge of the Atlantic Refining executives.

ACQUIRES JUDELSON PATENT

The Chemical & Vacuum Machinery Co., Inc., Buffalo, N. Y., has acquired from the Judelson Evapo-Dryer Corp., New York City, all rights to build and market exclusively the apparatus known as the Judelson Evapo-Dryer under Process Patent 1,527,193, Dryer Patent 1,527,192 and Insulator Patent 1,513,595.

Thousands Waiting For It

The complete "1926 Semi-Annual Review" of the Petroleum Industry will be published in the July 29 issue of The Oil and Gas Journal.

The large Tulsa editorial staff and scores of trained representatives in petroleum centers everywhere are collecting information, making comparisons and analyzing the figures to show what bearing the past six months will have on the next half year.

Thousands of oil men, Producers, Refiners, Marketers, Natural Gasoline Manufacturers, Pipeliners, Drilling Contractors, Superintendents and Executives are eagerly looking for it.

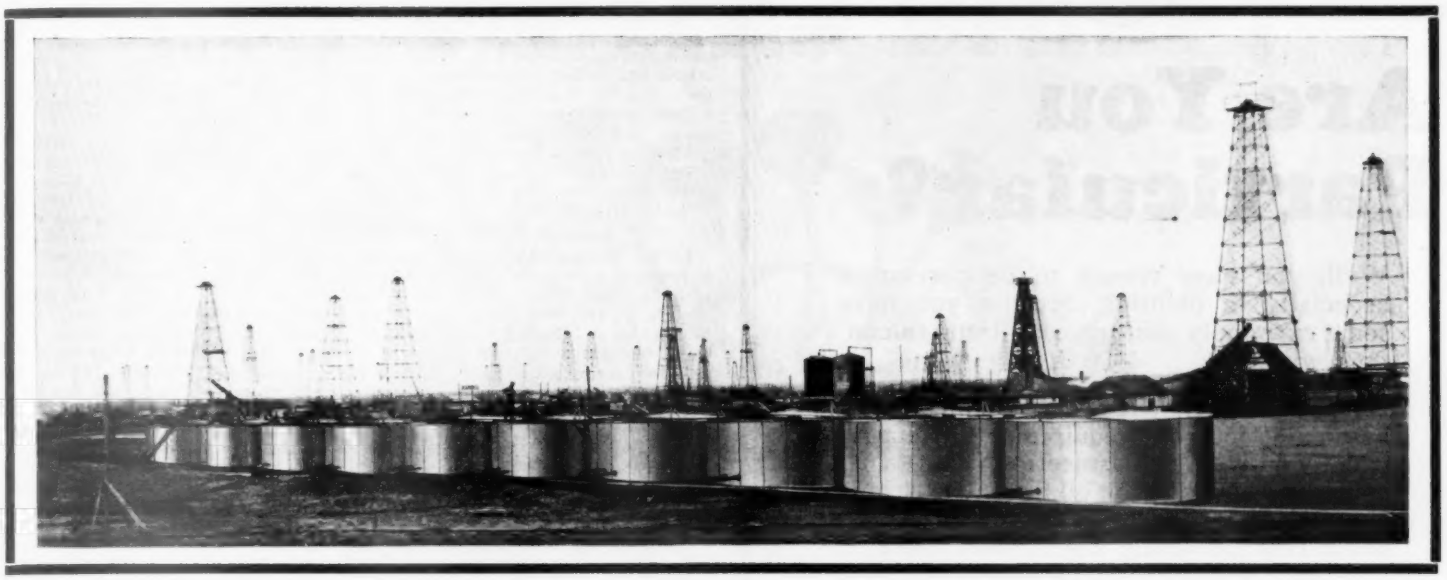
They will refer to it constantly as a guide to their activities during the rest of this year. Advertisements in it will be read, over and over again.

If you wish to buy or sell leases, production, equipment, royalties, service of any kind, use the Classified Wants Section.

Mail your advertisement now, so that it can appear in the Semi-Annual Number, where it will be working for you throughout the year.

The Oil and Gas Journal
Tulsa, Okla.

Plenty of Oil Wells and *Butler Bolted Tanks Here!*



This photograph is of the Tonkawa, Oklahoma, Field. The Butler Bolted Tanks shown here are on the Wentz Oil Company Lease.

You see Butler Bolted Tanks in practically every oil field. There are reasons for such widespread use of this equipment. Butler Tanks are quickly erected and are always dependable.

Multiple punching machines make the holes in the sheets. All body holes in each sheet are punched at one time. Accuracy is thus secured. Speed of erection is assured!

Butler sheets are larger. Consequently there are fewer sheets necessary to the tank. Fewer sheets mean fewer chances for leaks!

Butler dealers are near the fields. They are there to give prompt service! You will find them located as follows:

M & V Tank Company, at Wichita Falls, Vernon, Olney, Nocona, Panhandle, Cross Plains and Amarillo, Texas
Drane-Humphrey Co., at San Angelo, Big Lake and McCamey, Texas, and Carlsbad, New Mexico
Drane Tank Company, at Tulsa and Holdenville, Oklahoma, Eldorado and Madison, Kansas
M. A. Trimmer, at Blackwell, Oklahoma
Southern Steel Co., at San Antonio and Mirando City, Texas
Los Angeles Mfg. Co., at Los Angeles, California
Petroleum Specialties Co., at Casper, Wyoming
Thomas Moran, at Oil City, Georgetown and Shreveport, Louisiana
Continental Supply Co., at Kevin, Montana
G. J. Gillespie, 32 Fenchurch St., London, E. C. 3, England

Any kind of welded tank made to your specifications

Butler Manufacturing Co.

Kansas City, Mo. **Minneapolis, Minn.**

Foreign Department: Room 903, 44 Whitehall St., New York, N. Y.

Butler Products include: *Ready-Made* Steel Buildings, Cans, Funnels, Buckets, Measuring Pumps

TRADE STEEL BUTLER PRODUCTS MARK

Truck Tanks, Underground Tanks, Storage Tanks, Etc.

Are You Particular?

Well, you have reason to be particular, especially in painting, because you have some extremely difficult conditions to contend with.

Do you know that real asphalt makes the best paint for your requirements? That is why VALDURA is meeting with such splendid success in the oil fields. Its base is genuine 99.5% pure Gilsonite Select Asphalt. It is absolutely waterproof; also acid and alkali resisting, and because it has been thoroughly tested under all manner of conditions by your particular industry, you can depend upon it.

Valdura Asphalt Paint

is a particular paint, because we are particular about what we put into it. Everything that goes into its manufacture is the best obtainable. It pays to be particular about any line of endeavor and we believe this is the secret of VALDURA's success.

Let us help you out on your next painting problem. Your inquiry will receive prompt attention.

American Asphalt Paint Company

844 Rush Street Chicago

DISTRIBUTED BY
THE NATIONAL SUPPLY COMPANIES

N. LOUISIANA-ARKANSAS

(Continued from Page 42)

Love and associates' No. 6 Zimmerman, NE cor. NE SW, Section 25-10-1e. Garret & Modisett Drilling Co.'s No. 2 Urania, Section 7-10-2e, formerly McGaha and associates' No. 2, is drilling at 1,365 feet. W. T. Murray's No. 2 Doughty, Section 36-10-1e, is waiting for a standard rig and is in 12 feet of broken sand topped at 1,509 feet.

On the Natural Gas & Fuel Corp.'s Urania lease, Section 18-10-2e, No. 1-H is waiting for casing to set at 1,545 feet and 6-inch was cemented at 1,530 feet at No. 2-H. No. 2-K and No. 3-K are waiting for standard rigs and No. 1-M is drilling at 1,050 feet. Vacuum Oil Co., making its debut in north Louisiana operations, has staked a location in the center of the NE of Section 3-10-2e, for No. 1 Louisiana Central. George W. Wetherbee's No. 2-A Urania, Section 2-9-1e, is drilling below the 1,000-foot level. The 6-inch plug is being drilled out at O. F. Whittaker's No. 5 King, Section 36-10-1e, at 1,490 feet.

Bossier Parish

In the Bellevue Field, Louisiana Oil & Refining Corp.'s No. 1-B fee, Section 11-19-11, was completed for a 10-bbl. pumper at 415 feet. The Texas Company's No. 1 Moon, Section 13-19-11, tested salt water and was abandoned at 493 feet. Autrey Oil Co.'s No. 4 Connell, Section 15-19-11, tested salt water with a show of oil at 381 feet and is waiting for orders. Doern and associates' No. 1 Bollinger, Section 9-22-11, is drilling chalk rock at 2,220 feet. Palmer Corp.'s No. 2 Ellston, Section 20-16-11, formerly reported as No. 1, is drilling in chalk at 1,425 feet. Woodley & Collins' No. 1 L. & A. Oil Co., Section 24-23-12, which had the Woodbine at 3,102-10 feet and was bailed in, making 10,000,000 feet of gas, is being cored at 3,111 feet. The well was spraying a little salt water.

Caddo Parish

A couple of nice wells were completed on the Gulf's Ferry Lake lease in Caddo Parish. No. 239, Section 22-20-16, is good for a 210-bbl. pumper at 2,286 feet and No. 241, Section 15-20-16, is pumping 130 bbls. daily from 2,286 feet. The Texas Company's No. 62 Caddo L. B., Section 33-21-16, was finished at 2,195 feet as a 10-bbl. pumper. Gilliam Syndicate completed a 5-bbl. Nacatoch sand pumper at 901 feet at No. 1 Cummings, Section 20-21-14, and is deepening No. 1 Sellington, Section 17-21-14, which was completed a few weeks ago in the Nacatoch for a 5-bbl. pumper. Tholl Oil Co.'s No. 10 Bashara, Section 23-21-15, is a 5-bbl. pumper at 1,610 feet.

Four and one-half inch casing was cemented at 2,190 feet at W. D. Chew's No. 1-A Caddo L. B., Section 9-20-16, and his No. 4 State, Section 34-21-16, is being swabbed to test at 1,631 feet. Dixie Oil Co.'s No. 1 Jolly, Section 27-22-15, is drilling in red shale at 4,144 feet. Dixie lost the hole at 1,630 feet at No. 77 Robertshaw, Section 14-21-15, and skidded the rig over and is drilling at 400 feet at the second hole. Dixie's No. 15 Muslow, Section 7-20-15, which was completed for a 12-bbl. pumper at 1,086 feet, is being deepened and 6-inch was cemented at 2,166 feet.

Gulf Refining Co.'s No. 1 Byrd, Section 2-19-14, tested salt water with a show of gas at 2,854 feet and is drilling in lime and shale at 2,980 feet. Double I Oil Co.'s No. 6 Watkins, 1,070 feet south and 1,170 feet west NE cor. Section 27-21-15, is waiting for a standard rig at 1,652 feet. Gulf's No. 242 Ferry Lake, Section 16-20-16, tested 1,500,000 feet of gas at 2,276 feet and is waiting for orders. Drillers are fishing for the bailer at 2,280 feet at No. 243 and No. 246 is drilling at 871 feet. A derrick is up for No. 250 Ferry Lake, SW cor. Section 29-20-16, and derricks are being built for No. 251 and No. 252, both in Section 15. Gulf's No. 6-U Levee Board, Section 9-20-16, is drilling at 1,044 feet and No. 1-E Muslow, Section 35-21-15, is drilling in hard shale at 4,350 feet. Arrangements are being made to set 6-inch at 1,430 feet at Lewis Oil Corp.'s No. 7 Vespy, Section 15-21-15.

Other Drilling Operations

Magnolia Petroleum Co.'s No. 16 Dillon, Section 24-21-15, is drilling at 2,499 feet; No. 19 in lime at 2,505 feet and No. 1 Spell, Section 22-21-15, is going through lime at 3,282 feet. Magnolia's No. 1 Wiley Bradford, Section 24-21-15, is coring shale at 3,669 feet. Six-inch is being set at 1,300 feet at Morris Drilling Co.'s No. 1 fee, Section 1-20-16. Ohio Oil Co.'s No. 1 Ardis, Section 1-21-15, is plugging back from 4,656 feet to about 3,745 feet to make a test for the big gas producing horizon. Surface casing was set at 80 feet at Owl Oil Co.'s No. 1 Bryson, Section 9-17-16, and at 90 feet at No. 2, Section 7-17-16. Page & Caldwell's No. 1 Hobbs, Section 29-21-15, is being swabbed to test at 2,250 feet. Standish Oil & Refining Co.'s No. 7 Allen, Section 23-22-15, is being bailed to test at 1,070 feet.

Six-inch casing is being set at 2,143 feet at The Texas Company's No. 63 Caddo L. B., Section 14-21-15, and a rig is being moved in for No. 1-B, Section 22-15-12. The Texas Company's No. 42 C. M. L. Co., Section 23-21-15, is shut down at 3,700 feet while pumps are being changed. Same company's No. 4 Chew fee, Section 33-21-16, is being put on the pump at 1,863 feet. On The Texas Company's other leases in Caddo No. 1-B F. J. Bayou, Section 15-20-16, is drilling at 2,232 feet; No. 58 Harrell, Section 4-21-16, is spudding; 6-inch was cemented at 1,305 feet at No. 4 Hicks & Payne, Section 21-21-15; No. 7-A Hobbs, Section 28-21-15, is waiting for a standard rig with 300 feet of oil in the hole from sand at 1,600 feet; and No. 3-B Hobbs, Section 21-21-15, is waiting for a standard rig at 1,642 feet. Thomasson and associates' No. 1 Muslow fee, Section 31-21-15, is being rigged. Surface casing was set at 180 feet at Victor Wenzell's No. 1 Thomas, Section 15-20-15, and his No. 1 Wemple, Section 14-20-15, is drilling at 50 feet. Woodley Petroleum Co.'s No. 3 Knight, Section 35-16-12, is drilling out the plug at 2,423 feet.

Caldwell Parish

Humble Oil & Refining Co.'s No. 1-A Louisiana Central, Section 9-11-3e, is drilling in rock at 1,732 feet. Surface casing was set at 102 feet at T. Robbins' No. 1 Bessley, Section 10-11-4e. Southern Crude Oil Purchasing Co. is rigging up No. 1 Caldwell, Section 35-14-5e.

Claiborne Parish

Gulf Refining Co. is moving in a rig for No. 1 Crichton, 330 feet north and 380 feet east SW cor. SE, Section 35-19-8. Gilliland & Ramsey's No. 1-D Taylor, Section 14-23-8, is drilling in sandy lime at 4,330 feet. Standard Oil Co.'s No. 35 Lowenberg, Section 24-21-8, is drilling in oil sand at 1,340 feet. Triangle Drilling Co.'s No. 1 Keen, Section 7-19-5, is drilling in anhydrite at 4,330 feet.

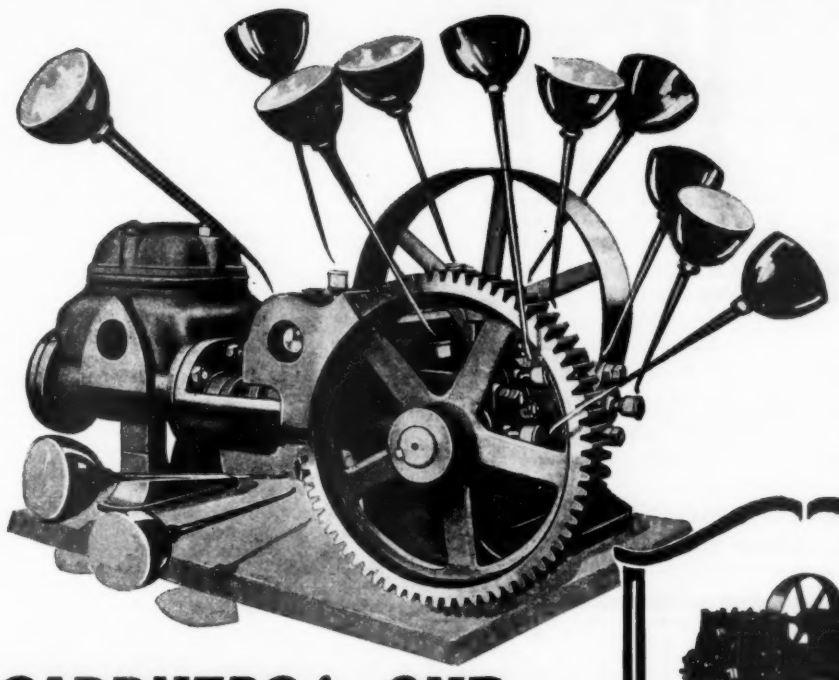
DeSoto Parish

Dixie Oil Co. reset 6⅝-inch casing at 3,815 feet at No. 1 Jenkins, Section 9-12-11. Carl K. Dresser's No. 1 Williamson, Section 29-15-14, is drilling in hard shale at 2,907 feet. J. P. Evans' No. 1 Louisiana L. & D. Co., Section 15-12-14, is making 4,000,000 feet of dry gas at 3,050 feet and is shut down for orders. Evans' No. 1 Sutherlin, Section 20-12-14, passed up gas at 2,900 feet and is drillin gat 2,950 feet. Magnolia Petroleum Corp.'s No. 1 Bond, Section 27-12-11, is drilling in hard lime at 3,363 feet. Peer Oil Corp.'s No. 1 Wollums, 330 feet south and east NW cor. Section 23-13-13, is a rig.

Grant Parish

The plug at 1,456 feet at Bradley & Cozart's No. 1 Holmes, Section 16-9-1e, is being drilled out to test sand at 1,460-66 feet. Surface casing was set at 90 feet at Fuller and associates' No. 1 Banes, Section 26-6-5w. Same operators' No. 1 Harrison, Section 9-6-5w, is drilling at 90 feet. Gulf did not test 7 feet of sand at 1,385-92 feet and is drilling in sand rock at 1,410 feet. Gulf's No. 8-A Swope, Section 15-9-2w, is drilling at 1,050 feet and No. 11-A, Section 20-9-2w, is rigging. Tunica Petroleum Co.'s No.

WHY DO THIS DAILY?



Oil GARDNERS in ONE place ONCE a month!

It is the day of labor-saving machinery, but get machines *labor-saving in 100% degree!*
GARDNER self-lubricating pumps save you the time and drudgery of daily oiling. Furthermore, they insure pumps *perfectly oiled* at all times and therefore longer lived.

Let us send you descriptive Bulletins.

THE GARDNER GOVERNOR COMPANY
Quincy, Illinois

CHICAGO 549 Washington Blvd.	NEW YORK 534 Singer Bldg.	PHILADELPHIA 604 Arch St.	MUSKOGEE 323 Dayton St.
SHREVEPORT 561 Rutherford St.	DALLAS 2515 Maple Ave.	HOUSTON 1242 Heights Blvd.	SAN FRANCISCO 401 Rialto Bldg.
	LOS ANGELES 684 Santa Fe Ave.	LONDON 25, Bishopsgate, E. C. 2	

Oil Industry Distributors

Atlas Supply Co., Muskogee, Tulsa and Fort Worth
Kirk W. Eickelberger, Rialto Bldg., San Francisco
Emsco Derrick & Equipment Co., 67th and Alameda Sts., Los Angeles
Haywood Williamson Co., Shreveport
F. W. Heitman Co., Houston
International Supply Co., Stores in all fields
Norvell-Wilder Hdw. Co., Houston, Beaumont and Shreveport
Republic Supply Co., Los Angeles

"Baby Booster" 4½x10 Slush End for portable rigs

Enclosed "Junior Booster" Slush Pump

Outside Center-Packed Plunger Type

GARDNER

No need to coddle these hoists!

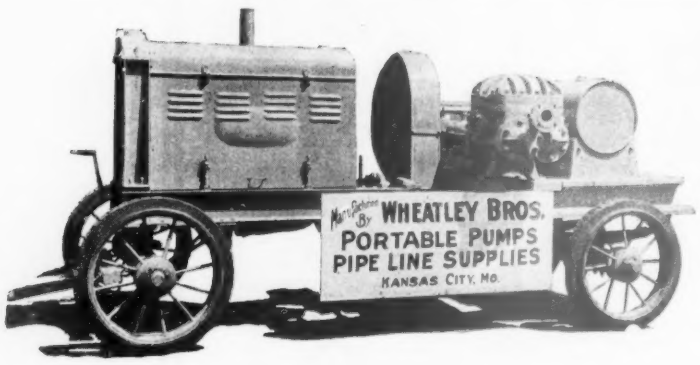
In the busy shop or in active field operations there is no place for equipment that must be coaxed into giving quick, smooth and positive operation.

Triblocs need no coddling or coaxing to give their best—whether the work is on a grimy, dusty oil well job or in an extremely clean, bright food factory. The harder and dirtier the work, the more important the consistent service of Tribloc Chain Hoists.

Let us send you Catalog 7-B

FORD CHAIN BLOCK CO.
2nd and Diamond Sts.,
Philadelphia, Pa.

We also manufacture "THE MOTORBLOC"—
an electrically driven chain hoist.



WHEATLEY PORTABLE PUMPING UNITS

have proven successful through actual service over a period of 2½ years.

One pipe line company alone operates 65 Wheatley units.

Write for further information.

Wheatley Brothers Machine Works

1906 Wyandotte St.,
KANSAS CITY, MO.

24 No. Owasso St.
TULSA, OKLA.

1 L. & A., Section 20-9-1e, was abandoned in salt water sand at 1,700 feet.

Monroe District

Two gas wells were completed in the Monroe district last week. Southern Carbon Co.'s No. 2-B Grayling, Section 32-21-4e, gauged 17,000,000 feet of gas at 2,028 feet and G. E. Jordan's No. 1 Fudicaker, Section 13-18-4e, was good for 2,500,000 feet at 2,239 feet. Boisseau and 150 feet south NE cor. NW, Section 11-21-7e, is fishing for junk at 2,546 feet. A rig is up for Standard Oil Corp.'s No. 1 Interstate Cooperage Co., 330 feet west and 150 feet south N7 cor. NW, Section 34-21-8e. Maury Drilling Co.'s No. 3 McErwin, Section 20-19-4e, is drilling at 1,900 feet. Six-inch was cemented at 2,165 feet at R. J. O'Brien's No. 1 Ray & Green, Section 2-18-4e.

Ouachita Gas Co. lost the hole at 136 feet at No. 2 D'Arbone, Section 25-19-2e, and is skidding the derrick 125 feet southeast. Palmer Corp.'s No. 1 Central, Section 1-19-4e, is drilling at 840 feet, and No. 2 Milsap, Section 35-19-4e, is drilling at 1,667 feet. Arkansas Fuel Oil Co.'s No. 1 James Reeves, Section 14-20-1e, is drilling in black shale at 3,648 feet. A derrick is up for R. W. Rhodes' No. 1 Pickens, SW cor. NE NW, Section 22-22-2w. Ruston Drilling Co.'s No. 1 Parks, Section 30-20-4e, tested 3,000,000 feet of gas at 2,190 feet and is waiting for orders.

Natchitoches Parish

Brothers and associates' No. 1 Cockfield, Section 78-7-5w, is rigging up. Davison and associates' No. 1 Guellat, Section 47-7-5, is drilling in guhbo at 2,069 feet. Forrest's No. 1 Ayers, Section 3-13-7, is drilling at 2,380 feet, and location has been staked for No. 2 Ayers, 426 feet west and 315 feet north, center Section 3-13-7.

Sabine Parish

L. M. Emlet's No. 5 H. L. Bowman, Section 9-7-12, is drilling in sand and shale at 4,065 feet. Emlet's No. 1 Sabine Lumber Co., Section 8-7-13, is a derrick. J. B. Greer's No. 2 Peavy-Wilson, Section 11-5-9w, is drilling in gumbo at 2,300 feet. Magnolia Petroleum Co. has staked location for No. 1 L. L. L. L. Co., 330 feet north and west SE cor. SW NE, Section 11-6-11. Toro Petroleum Co.'s No. 3 Drake, Section 19-4-11, is drilling at 1,290 feet.

Webster Parish

Humble Oil & Refining Co.'s No. 2 R. Cox, Section 22-21-10, is drilling in gumbo at 2,542 feet. Magnolia's No. 1 Sexton, Section 32-23-9, is drilling in shale and rock at 930 feet. A derrick is up for Magnolia's No. 3 Tiner, 330 feet north and west SE cor. SE NW, Section 21-21-10, and a derrick is up for Magnolia's No. 3-A Turner, SW SW NE, Section 21-21-10. Ohio's No. 1 Cox, Section 23-21-10, is drilling in sticky shale at 5,686 feet. Six-inch casing is being set at Ohio's No. 3 Hollway, Section 23-21-10, at 4,254 feet. Ohio's No. 7 Sidney Heirs, Section 16-21-10, tested dry at 2,535-38 feet and is going deeper. Palmer Corp.'s No. 1 Crichton, SW cor. Section 30-20-8, is a rig. Smitherman & McDonald's No. 1 Oakley, Section 29-23-11, is drilling in lime rock at 4,575 feet. Southern Crude Oil Purchasing Co. and Ramsey's No. 1 Munn, Section 1-22-10, is drilling in brown sandy lime at 4,292 feet.

Winn Parish

Extending of development work on the Winn Parish side of Urania keeps that section's field operations on the climb. Six-inch was cemented at 1,460 feet at O. W. Clark's No. 4 Harper, Section 26-10-1e, and location has been staked for No. 5 and No. 6 is a derrick. Humble's wildcat, No. 7-A L. & A, Section 12-9-3w, was abandoned in salt water sand at 1,614 feet. Humble is fishing for the drill stem at 1,590 feet at No. 1-A Tremont, Section 26-11-1w. W. T. Hunt's No. 1 Edenborn, Section 8-9-3w, is drilling in rock at 2,110 feet. Keene & Woolf's No. 1 Radescich, Section 21-12-3w, was dry and abandoned at 2,328 feet. Same operators added another producer to Winn's list when No. 1 Tisdale, Section 26-10-1e, was completed in 5 feet of sand topped at 1,496 feet, for a 75-bbl. producer. Derrick is up for No. 2 Tisdale, NE cor. NW NW, Section 26. Ohio's No. 1 Edenborn, Section 4-12-1w, was the Winn Parish wildcat to cause excitement when it blew in throwing mud half way to the crown block. The gas was killed and formations are being cored at 1,480 feet. Surface casing was cemented at 100 feet at O'Neill & Schuman's No. 1 Albritton, Section 27-10-1e. Standard Oil Co.'s No. 1 Sanders, Section 27-10-1e, is drilling. C. H. Wilson's No. 1 Louisiana Central, Section 24-13-1e, is drilling at 1,860 feet.

SCATTERED WILDCATS

Woodley & Collins' No. 1 Thomas, Section 23-16-10, Bienville Parish, is rigging. In Catahoula Parish, Magnolia Petroleum Co. took over S. B. Goodman's No. 1 Montgomery, Section 8-10-9e, and cored salt water sand at 3,232 feet and is drilling ahead in brown shale and lignite at 3,315 feet. Louisiana Petroleum Co.'s No. 1 Davis, Section 20-16-3w, is drilling at 310 feet. In Lincoln Parish, Arkansas Fuel Oil Co.'s No. 1 Cooper, Section 3-20-4w, is drilling in chalk at 2,635 feet. Bannon and associates' Madison Parish test, No. 1 Yerger, Section 51-16-4e, had a showing of oil at 1,637-39 feet and is drilling in shale at 1,700 feet.

Union County

With Lisbon leading the parade, Union County turned in 19 completions during the week to help check the slide in Arkansas' production. Sixteen of the completions were in the Lisbon Field and the other three were in Smackover.

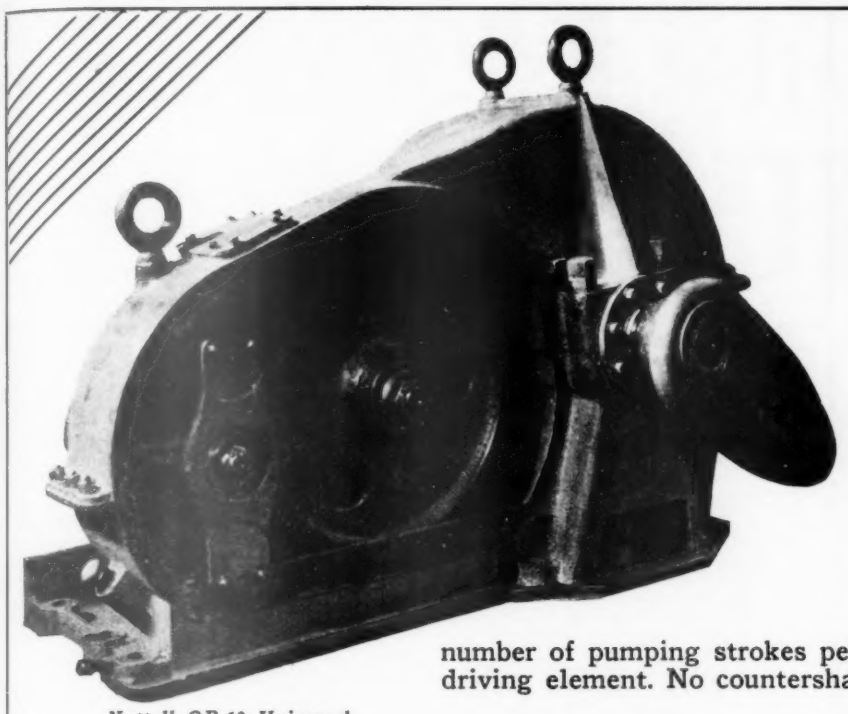
Atlantic Oil Producing Co.'s No. 5 Goodwin, Section 16-17-16, was completed in sand at 2,122-65 feet for an 80-bbl. pumper. Eason and associates' No. 1 Mooty, NE cor. Section 22-17-16, is the first producer in that section and was completed for a 15-bbl. pumper at 2,120-39 feet. Humble brought in a pair, No. 4 Goodwin, Section 16-17-16, is flowing 50 bbls. through 2-inch tubing from sand at 2,142-65 feet and No. 8 Goodwin is flowing 75 bbls. through the tubing from sand at 2,135-56 feet. Lion Oil & Refining Co.'s No. 12-A Mitchell, Section 17-17-16, is flowing 40 bbls. through tubing from 2,118-36 feet and No. 1-C Mitchell is making 40 bbls. naturally from 2,136-57 feet. Magnolia Petroleum Co.'s No. 3 Harrell, Section 4-17-16, is pumping 90 bbls. from sand at 2,092 to 2,132 feet. No. 4 Harrell was finished in sand at 2,080 to 2,119 feet for a 90-bbl. pumper.

Spraying a little oil Magnolia's No. 1 Slaughter, Section 8-17-16, was completed for a 1,000,000-foot gas well in sand at 2,085 to 2,106 feet. Natural Gas & Fuel Corp.'s No. 4 Willett, Section 4-17-16, is pumping 50 bbls. from sand at 2,078 to 2,122 feet. Ohio Oil Co.'s No. 5 Goodwin, Section 21-17-16, was good for 50 bbls. on the pump at 2,122 feet. Pure Oil Co.'s No. 3-M Harrell, Section 4-17-16, is pumping 12 bbls. from sand at 2,110-47 feet. Reynolds & Marr's No. 1 Goodwin, Section 21-17-16, was finished at 2,163 feet as a 15-bbl. pumper. Rovenger Oil Corp.'s No. 7 Goodwin, Section 16-17-16, is flowing 50 bbls. through tubing from sand at 2,078 to 2,108 feet. Southern Crude Oil Purchasing Co.'s No. 3 Slaughter, Section 3-17-16, is making 30 bbls. on the pump from sand at 2,065 to 2,110 feet.

Atlantic's No. 1 on the Ford lease, Section 3-17-16, has 600 feet of oil in the hole from sand at 2,090 to 2,115 feet and is waiting for a standard rig. On the Atlantic's Goodwin lease, Section 16-17-16, No. 2 has 200 feet of oil in the hole from 38 feet of broken sand topped at 2,102 feet and is waiting for a standard rig; No. 6 is a derrick and No. 7 is drilling at 100 feet. A derrick is up for Foster & McWilliams' No. 3 Mooty, SE cor. SW SW, Section 15-17-16. In Section 21-17-16, Gulf Refining Co.'s No. 1 Parker, 1,120 feet north and 200 feet east center Section is a derrick. No. 2 Primm is drilling at 850 feet and a rig is up for No. 3 Primm, 200 feet south and east NW cor. Section.

New Locations and Drilling

Humble has a rig up for No. 1 Cruse, NW cor. SE NE, Section 21-17-16, and location has been staked for No. 2 Cruse, NE cor. SE NE. A derrick is up for



Nuttall OP-12 Universal Gear Unit

A Unique Type of Universal Gear Drive for Oil Pumping

The Nuttall Universal Gear Unit marks a distinct advance in oil pumping engineering. Its universal application to any type of driving power, the flexible pumping speeds and its versatility in permitting change from one motive power to another without affecting the gear unit, appeals strongly to every practical oil man.

This novel gear unit is installed between the driving element and the standard pitman, and makes it possible to change the number of pumping strokes per minute without affecting the efficiency of the driving element. No countershaft, no band wheel required.

Let us send you our circular "O" describing this modern pumping unit.

Philadelphia Office
Westinghouse Bldg.
30th & Walnut

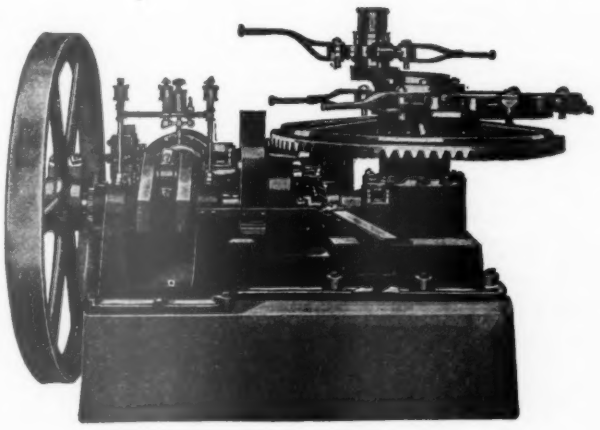
R.D. NUTTALL COMPANY
PITTSBURGH PENNSYLVANIA

Chicago Office
2133 Conway Bldg.

OIL WELL SUPPLY CO.
Authorized Distributor
Canadian Agent

LYMAN TUBE & SUPPLY COMPANY
Toronto, Montreal

PATTIN Combination Geared Power



Complete information on this modern pumping outfit will be gladly mailed on request.

STRONG—WELL MADE—RELIABLE

Note These Features

1. Spur Gears are cut from the solid and run very quietly.
2. Clutch Hub is of steel, and the pinion gear cut from solid steel.
3. Engine crankshaft has an O. B. bearing cast on the bed plate and is self-contained.
4. Lever Clutch is mounted on engine shaft, is fitted with wood shoes, and will carry the heaviest loads without slipping.
5. One large oil reservoir on disc pin oils the complete outfit.
6. Built in 15 and 20 H. P. sizes, also 8 and 12 H. P. single disc.

PATTIN BROTHERS COMPANY
Marietta, Ohio

Manufacturers of

Gas Engines
Pumping Powers
Water Pumps
Air and Gas Compressors
Vacuum Pumps
Oil Country Boilers
Torpedo Reels and Clamps
Shackle Irons
Steel Storage Tanks
High-Pressure Tanks
Howe Casing Heads

Figure low on pipe!

Figure *low* first-cost — *low* installation — *low* maintenance. Line investment and upkeep are drastically cut by engineers and purchasing agents who know Greenspon's pipe values.

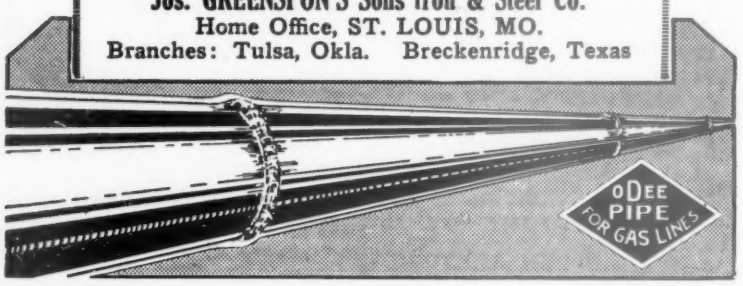
ODEE Pipe for Gas Lines

carries our guarantee of utmost service, at prices that save you 1/3 or more. Furnished in double joints, it saves approximately 50% in welding and installation cost.

TERMS TO SUIT: With a reasonable down payment, the line can be paid for out of income, in place of full cash payment out of capital.

We can render real service on used line pipe and oil well casing of merit, from Tulsa, Okla., Breckenridge, Texas, or St. Louis.

Jos. GREENSPON'S Sons Iron & Steel Co.
Home Office, ST. LOUIS, MO.
Branches: Tulsa, Okla. Breckenridge, Texas



WHY EXPERIMENT?

O'Brien steel derricks and drilling equipment have proven their worth for twelve years.

We have had, not only practical experience, but the services and advice of expert structural engineers. That is why we claim *the* perfect drilling equipment. Write for prices.

Manufactured and sold by the

O'BRIEN STEEL CONSTRUCTION COMPANY, Inc.
Washington, Penna.

Western Representative
RIG EQUIPMENT COMPANY, 1524 So. St. Louis St., Tulsa, Okla.

Humble's No. 1 Goodwin, NE cor. SE NE, Section 20-17-16. H. L. Hunt's No. 6 Murphy, Section 4-17-16, is drilling at 700 feet. Keisker and associates' No. 2 Harrell, Section 15-17-16, is being swabbed to test 35 feet of broken sand topped at 2,090 to 2,125 feet. On the Lion Oil & Refining Co.'s Mitchell lease in Section 17-17-16, No. 4-A, SE cor. NE NE, is a derrick; No. 5-A is drilling at 1,350 feet; No. 18-A, 660 feet north and west SE cor. NE, is a derrick; No. 19-A, C NE SE, is a derrick pattern; No. 1-B is drilling and No. 2-C is rigged up ready to go.

J. L. Meek's No. 1 Milner, Section 15-17-16, is a rig. Natural Gas & Fuel Corp.'s No. 5 Willett, Section 4-17-16, has 600 feet of oil in the hole from sand at 2,082 to 2,129 feet and is waiting for a standard rig; No. 6 and No. 7 on the same lease are waiting for standard rigs. A derrick is up for Ohio's No. 8 Goodwin, SW cor. SW NW, Section 21-17-16; 6-inch was cemented at 2,140 feet at No. 6 and No. 7 is drilling at 310 feet. Six-inch casing was cemented at 2,090 feet at Rovenger's No. 6 Goodwin, Section 16-17-16. Southern Crude Oil Purchasing Co.'s No. 4 Slaughter, Section 3-17-16, has 350 feet of oil in the hole from sand at 2,065 to 2,110 feet and a derrick is up for No. 5 Slaughter, 150 feet south and west, NE cor. W half SW SW, Section 3-17-16. Wingfield and associates' No. 2-B Slaughter, Section 3-17-16, is waiting for a standard rig and has 1,000 feet of oil in the hole from sand at 2,089 to 2,114 feet; No. 4-B, CNL NW SW, is spudding and No. 3-B is drilling at 420 feet.

Smackover Field

In Smackover, Amerada Petroleum Corp.'s No. 7 Calloway, Section 4-16-15, was completed in sand at 2,363-65 feet for a 150-bbl. pumper. G. J. Childs' No. 3 fee, Section 8-16-16, was completed as a 25-bbl. pumper at 2,593-2,602 feet. Murdock and associates' No. 8 Hays, Section 4-16-15, was finished in sand at 2,348-75 feet pumping 200 bbls. of fluid, 5 per cent salt water.

A derrick is up for Belmont and associates' No. 1 Hollis, SW cor. NW NE, Section 13-18-15. F. A. Book's No. 1-A McDonald, Section 1-16-16, is being swabbed to test at 2,579 feet and is showing a small amount of oil and lots of salt water. Dyer Brothers' No. 1 Stout, Section 31-15-16, tested 100 feet of oil at 2,249 feet and is bailing to test at 2,251 feet. Eason and associates' No. 9 Murphy, Section 15-16-15, tested salt water at 2,349-51 feet and is waiting for orders. A derrick is up for Gladys Belle Oil Co.'s No. 5-A Cook, NE cor. SE NE, Section 16-16-15. Gulf's No. 21 T. C. Murphy, Section 9-16-15, has 1,400 feet of fluid in the hole at 2,434 feet and is waiting for a standard rig and a rig is up for No. 22 Murphy, 1,520 feet south and 660 feet west NE cor. Section 9. Gulf's No. 46 Werner, Section 6-16-16, is drilling at 650 feet. Hatfield and associates' No. 3 Ennis, SW cor. SE NE, Section 23-17-16, is drilling. Hollayfield and McFarland's No. 16 Giller, Section 11-16-15, is waiting for 2½ O. D. casing to set at 2,686 feet, and No. 13, in Section 10, is drilling at 2,635 feet.

H. L. Hunt's No. 1 Hammond, Section 27-16-16, is drilling at 100 feet. Six-inch casing was cemented at 2,685 feet at Hunt's No. 4 Swilley, Section 28-16-16. Imperial Oil & Gas Co.'s No. 1 Goodwin, Section 26-17-16, is standing with a hole full of salt water. Six-inch casing stuck at 2,588 feet and the total depth of the hole is 2,592 feet. E. M. Jones' No. 1 Foster, Section 19-16-16, tested salt water at 2,655 feet and is drilling ahead at 2,859 feet. Jones and Murphy's No. 1 Union, Section 27-19-14, is drilling at 110 feet. Arkansas Drilling Co.'s No. 1 Townes, Section 34-19-11, formerly Kampeter and others, cored the top of the Wilcox sand at 1,250 feet. Lion Oil & Refining Co.'s No. 10 Graves, Section 3-16-15, is drilling at 2,481 feet. A rig is up for Magnolia's No. 2 Werner, NE cor. Lot 2, NW, Section 1-16-17. Marine Oil Co.'s No. 1 Epps, SE cor. NE SW, Section 21-16-16, is a derrick pattern.

Ohio Oil Co.'s No. 3 Ballard, Section 14-16-15, is drilling at 2,572 feet. Six-inch casing was cemented at 2,711 feet at Peer Oil Corp.'s No. 6 Palmer, Section 9-16-15. A. H. Ramage's No. 6-G Lawton, Section 10-16-15, is waiting for a standard rig at 2,609 feet, and No. 7-G has 1,000 feet of oil in the hole from sand at 2,400-17 feet and waiting for a standard rig. Simms Oil Co.'s No. 4 Cook, Section 16-16-15, is drilling at 2,514 feet. Twelve-inch casing was stuck and cemented at 168 feet at Simms Oil Co.'s No. 1 Simmons, Section 9-18-13.

Skelly Oil Co.'s No. 2 Hall, Section 9-16-16, is drilling at 2,600 feet. Six-inch casing was cemented at 2,602 feet at Southern Crude Oil Purchasing Co.'s No. 1 Rumph, Section 8-16-16. Southern's No. 4-A Wells, Section 15-16-15, is standing with a hole full of oil from 2,597-2,605 feet and is waiting for a standard rig. No. 4-B Wells is a derrick. Standard Oil Co.'s No. 11 McClannahan, Section 6-16-15, is being bailed to test casing at 2,553 feet. Standard Oil Co. has spudded No. 4 J. M. Reynolds, Section 6-18-15. Stewart and associates' No. 5 Murphy, Section 9-16-15, is drilling at 2,480 feet. Sun Oil Co.'s No. 9 Brown, Section 8-18-15, is coring at 3,179 feet. Six-inch casing was cemented at 2,636 feet at Sure Oil Co.'s No. 5 Murphy, Section 15-16-15. Wingfield and associates' No. 1 Galligher, Section 10-17-17, is shut down at 2,246 feet for fuel.

Ouachita County

Humble Oil & Refining Co.'s No. 11-B Arnold, Section 26-15-16, was junked and abandoned at 2,788 feet. Louisiana Oil & Refining Corp.'s No. 2 Green, Section 22-15-19, is pumping 90 bbls. from sand at 1,536-38 feet. Ohio Oil Co.'s No. 14 Mullen, Section 27-15-16, was completed at 2,004 feet for a 5-bbl. pumper.

Gulf Refining Co.'s No. 19-A Umsted, Section 33-15-15, is drilling at 2,190 feet, and No. 20-A is down 1,295 feet going ahead. H. M. Harrell's No. 2 Moline Timber, Section 9-12-17, had the Nacatoch sand at 1,210 feet and is drilling at 1,600 feet. Humble's No. 10 Hildebrandt, Section 28-15-15, is rigged and ready to start. Imperial Oil & Gas Co.'s No. 10 McClannahan, SW cor. E half, Lot 3, Section 6-16-15, is drilling at 2,425 feet. Surface casing was set at 63 feet at W. R. Keever's No. 2 Neeley, Section 27-15-16. A. Meek's No. 1 Clawson, Section 35-15-17, has 400 feet of oil in the hole from sand at 2,995-2,303 feet and is waiting for a standard rig.

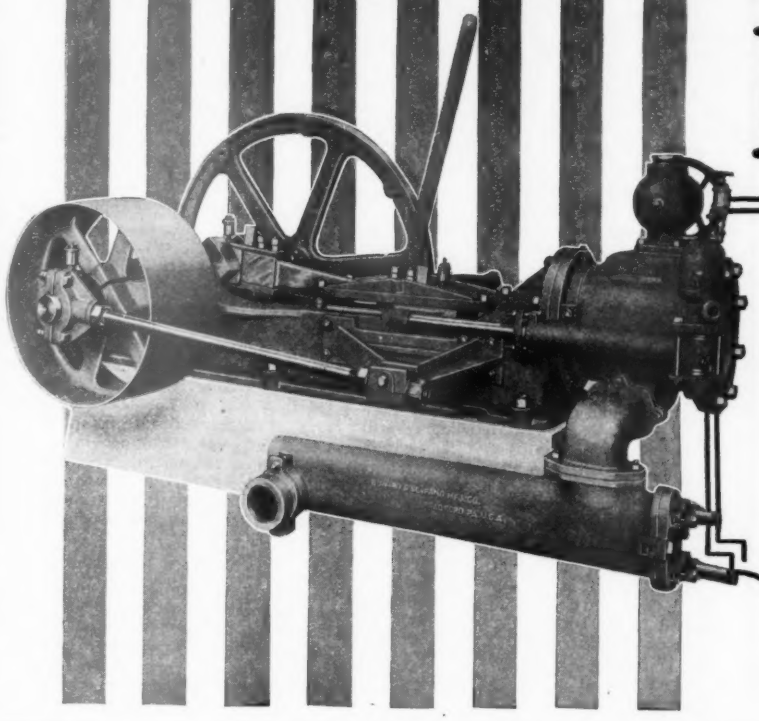
Junk is being sidetracked at 2,512 feet at Phillips Petroleum Co.'s No. 5 Johnson, Section 34-15-15. Arrangements are being made to deepen Phillip's No. 3 Laney, Section 31-15-15, and the Phillips Petroleum Co.'s deep test, No. 1 Tate, Section 9-14-17, is being reamed to set 8-inch casing at 3,111 feet. J. D. Reynolds' No. 1 Howell, Section 15-14-18, is drilling at 1,280 feet. Reynolds' No. 2 Ratch and Cartier, Section 36-13-18, is drilling at 1,530 feet. Roxana Petroleum Corp.'s No. 6 Berg, Section 28-15-15, is waiting for a standard rig and has 200 feet of oil in the hole from sand at 2,628-49 feet. Simms Oil Co. milled through the casing at 2,209 feet and the drilling stem stuck at 2,400 feet at No. 6 T. Murphy, Section 29-15-15. Smith Drilling Co.'s No. 3-B Shirley, Section 36-15-17, has 250 feet of oil in the hole from sand at 2,294-97 feet and is waiting for a standard rig.

Standard Oil Co.'s No. 10 Murphy, Section 29-15-15, is drilling at 2,336 feet. Six-inch casing is being set at 2,367 feet at The Texas Company's No. 17 Berry, Section 33-15-16. Arco Oil Co.'s No. 1 Davis, Section 22-15-19, is waiting for 6-inch casing to set at 1,558 feet. Louisiana Oil & Refining Corp.'s No. 1 Culp, Section 22-15-19, is drilling at 830 feet. Louisiana's No. 2 Jones, Section 30-15-19, is drilling at 1,650 feet. A rig is up for Magnolia's No. 4 Watson, Section 31-15-19. Reynolds and associates' No. 1-A Davis, Section 22-15-19, is waiting for a standard rig at 2,176 feet. Same operators' No. 1 Holton, Section 15-15-19, is shut down at 1,538 feet for orders.

Bradley County

Magnolia is setting 13⅜-inch casing at 963 feet at No. 1 Arkansas Lumber Co., Section 33-15-11. McMurry and asso-

Bovaird & Seyfang STEAM DRILLING ENGINES



The new Class C-1 Steam Engine illustrated is the latest BOVAIRD & SEYFANG development in Steam Engines, and was first placed on the market in 1924—*Renewable Babbitt Liners*, balanced slide valves, out board bearing, 3″ throttle valves—are a few of the many features of this engine that will meet with your approval. All parts except the cylinder, cylinder head, piston and rings are interchangeable. Made in sizes 23, 25, 28 and 30 H. P.

Descriptive bulletins and prices will be sent on request.

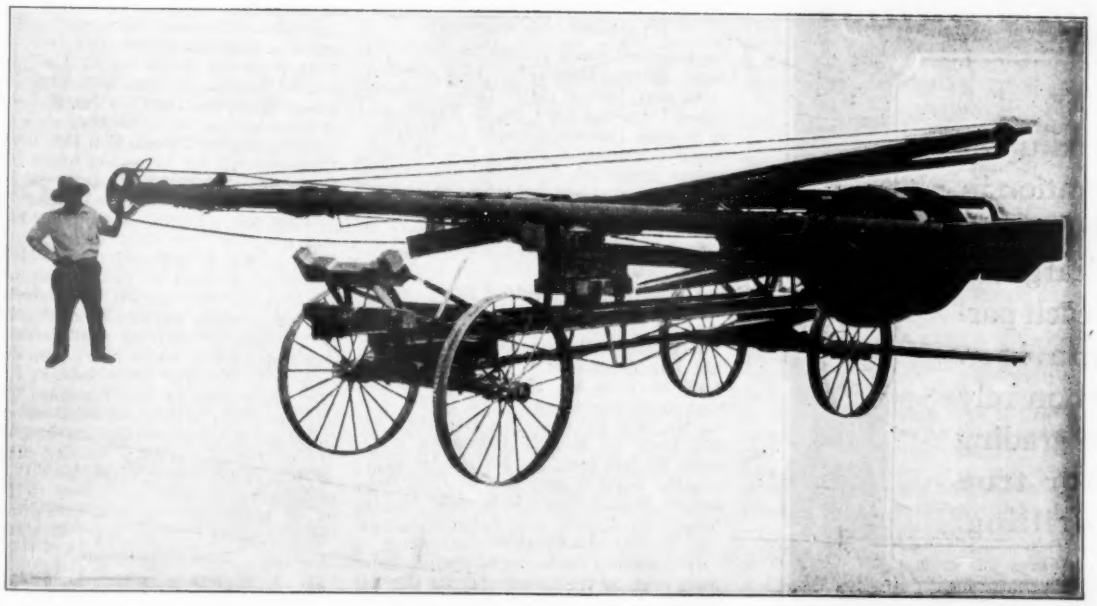
Carried in stock at all Bovaird Supply Co. stores.

BOVAIRD & SEYFANG MFG. CO
Bradford - - - Penna.

A TIME SAVER

You don't have to back, side step, or jockey for position with an IRON KING pulling machine. It works with equal freedom on either side of wagon and on any side of casing head. Just drive up to about eight feet of a well anywhere, swing it off, set it up and be ready for business.

If your oil well supply store will not get you an IRON KING write us direct.



THE IRON KING MANUFACTURING CO.
BRADNER, OHIO
Say you saw it in The Oil and Gas Journal

OTHER "PENBERTHY" PRODUCTS

Ejectors
Cellar Drainers
Oil Gages
Water Gages
Oil Cups
Grease Cups, Etc.

PENBERTHY PRODUCTS

Special High Pressure Automatic Injector

Owing to the increasing demand in the oil fields for injectors to operate on higher pressures, this high pressure injector is recommended where boilers are operated at pressures to 200 pounds.

Write For Catalog

PENBERTHY INJECTOR COMPANY
Established 1886
Canadian Plant: WINDSOR, ONT., CAN.
1260 Holden Ave., DETROIT, MICH.

PATRICK CARBON
for Diamond Core Drilling

You can depend upon Patrick coöperation in recommending the most economical grade of carbon for each particular formation. Buyers of carbon rely upon Patrick grading and values for true economy in drilling.

R. S. PATRICK
Duluth, Minnesota, U.S.A.
Cable Address, "Exploring" Duluth

ciates' No. 1 Southern Lumber Co., Section 7-15-11, is being rigged up. Lee Yount and associates' No. 1 Southern, Section 2-16-12, is a derrick pattern and Phillips Petroleum Co.'s No. 1 Southern, Section 36-16-11, is a derrick.

Columbia County

Gorden, Powell and Dickson's No. 4 Jones, Section 1-16-20, Stephens Field, was completed for a 5-bbl. pumper in sand at 2,215-25 feet. Same operators' No. 5 Jones is drilling at 450 feet. H. W. Aarnes' No. 2 Brown, Section 13-15-20, is drilling in lime at 3,500 feet.

Lafayette County

Arkansas Fuel Oil Co.'s No. 4 Allen, Section 18-19-24, is drilling in chalk at 2,660 feet. Arkansas' No. 4 Red River, Section 18-19-24, is coring a hard formation at 3,533 feet. Gulf Refining Co.'s No. 1-E Red River, Section 10-19-24, is drilling in brown lime and sand at 2,697 feet. The Texas Company's No. 1 Colvin, Section 14-17-24, is going through brown lime and sand at 1,682 feet.

Nevada County

Autrey Oil Co.'s No. 6 Womack, Section 10-14-21, is waiting for 6-inch casing to set at 1,210 feet. Casing stuck at 1,200 feet at W. F. Furen and associates' No. 1 Groves, Section 2-14-21. Humble Oil & Refining Co.'s No. 4 Bodcau, Section 9-15-22, cored hard sand at 2,427 feet.

SCATTERED WILDCATS

Ashley County. Pine Prairie Oil Co.'s No. 1 fee, Section 7-17-5, is being reamed to the bottom at 3,405 feet.

Calhoun County. A derrick pattern is on location for Delmar Oil Co.'s No. 1 Guibar, NE cor. SW SE, Section 16-11-14. In the same county, Southern Crude Oil Purchasing Co.'s No. 1 Calion, Section 1-16-14, is drilling at 2,730 feet.

Drew County. McClintock and Goodka's No. 1 Ogle, Section 35-13-5, is being reamed to the bottom at 2,395 feet.

Frank S. Myers' No. 2 Nichols, Section 17-11s-25w, Hempstead County, tested dry at 1,170 feet and is being deepened.

Decem Oil Co.'s No. 1 Hinsley, Section 7-3-10, Jefferson County, is being reamed to the bottom at 2,505 feet.

In Little River County, Mellick Oil Co.'s No. 1 Hawkins, Section 10-11-31, is drilling at 1,830 feet.

Gulf Refining Co. is moving in a rig for No. 1 Dorsey, 310 feet east, and 300 feet north center, Section 27-17-26, Miller County.

MEXICAN FIELDS

(Continued from Page 42)

cos cemented 8-inch in gray lime at 1,295 feet. Martin Head's No. 13-A Etienne is in gray lime at 1,645 feet. International Petroleum Co.'s No. 25 Tanchicuin is in gray lime at 1,765 feet. Mexican Sinclair Petroleum Corp.'s No. 29 Tananturo cemented 8-inch in hard shale and shells at 1,340 feet; No. 30 Tananturo is fishing for tools in gray lime at 1,825 feet; No. 17-A Lot 2 Camolote is shut down for orders in the Tamasopa at 2,203 feet. Mexican Gulf Oil Co.'s No. 4-A Piedras is in gray lime at 1,775 feet; its No. 25 Lopez is a derrick, and it is skidding over for No. 27, same. Transcontinental Petroleum Co.'s No. 2, Lot 15, Tanchicuin is in gray lime at 1,420 feet; its No. 11, Lot 14, same, is shut down account water at 1,200 feet; its No. H-7 Etienne is in gray shale at 975 feet; its. No. 27 Barbarena is in shale at 500 feet; its No. 16 Ojital is running 8-inch in gray lime at 1,250 feet, and its No. 23 Piazzi is in shale at 875 feet.

In Cacalilao

In the Cacalilao sector of the northern fields consider the following: La Corona Petroleum Co.'s Nos. 182 and 183, Lot 4, have each cemented 8-inch in the San Felipe at 1,120 and 1,150 feet respectively. International Petroleum Co.'s No. 273, Lot 5, is in gray shale at 640 feet. Mexican Sinclair Petroleum Corp.'s No. 95-A Lot 3, is rigging, and its No. 129, Lot 2, continues to wait for permit. Transcontinental Petroleum Co.'s operations in Lot 4: No. 244 is running 10-inch at 600 feet in shale; No. 247 is testing for production at 2,055 feet, lime; No. 271 cemented 10-inch at 600 feet in shale, and No. 60 Paciencia, just north of Cacalilao, also cemented 10-inch at 600 feet in shale.

At Ebano

In the Ebano sector of the northern fields, Mexican Petroleum Co.'s operations follow: Its No. 46 Chijol is in white lime banded with flint at 2,060 feet; its No. 55 is fishing for a bit at 2,204 feet, gray lime; its No. 56 is in the same formation at 1,875 feet; its No. 112 La Dicha is shut down account bad roads at 1,576 feet, gray lime; its No. 50 Midway will cement 8-inch at 1,175 feet in gray lime; its No. 12-A La Pez will cement 8-inch in gray lime at 1,870 feet. There are a number of locations rigged that continued to wait for permits, and there are several locations rigging that are shut down account bad roads.

South Fields

There is but little animation in the south fields at this time. Huasteca Petroleum Co.'s No. 81 Cerro Azul is in hard gray shale at 1,738 feet; its No. 82 is in blue shale at 350 feet; and down in Tierra Blanca its No. 72 is in gray shale at 1,935 feet; its No. 83 is in gray shale at 760 feet, and both in Cerro Azul and Tierra Blanca there are a number of tests rigging. Mexican Eagle Oil Co.'s No. 49 Lot 111 Amatlan is in gray shale at 600 feet; its No. 9 San Diego has cemented 6-inch in hard shale and gumbo. Down in Furbero, Mexican Eagle's No. 37 is in crystalline rock at 2,315 feet. In La Pita, Penn Mex Fuel Co.'s No. 3 is in sandy blue shale at 4,590 feet.

Northern Miscellany

Among the miscellaneous northern pools the following obtains: In Los Esteros, American International Fuel Co.'s No. 30 continues shut down at 1,492 feet waiting for an opportunity to test the oil showing occurring there, which may, or may not prove it a well. Bad weather has precluded to this writing the building of a suitable sump to conduct such a test. The company's No. 31 is cementing 4¾-inch at 2,148 feet in gray lime and in its No. 32 the drill is in gray lime at 1,280 feet.

In the Corcovado, La Corona Petroleum Co.'s No. 24, Lot 6, is in gray lime at 1,420 feet; its No. 25 is in shale at 400 feet. Mexican Sinclair Petroleum Corp.'s No. 4-B, Lot 1 Garruche, (Corcovado) is in Tamasopa limestone at 2,990 feet. Mexican Gulf Oil Co.'s No. 25-A Chapacao (Corcovado) is in gray lime at 2,000 feet; its No. 29-A is in a similar formation at 1,247 feet, and it is preparing two additional locations. Rich Mex Oil Co.'s No. 6, Lot D, is in gray lime at 1,385 feet.

In the Marland Field, Cia. Pet. Franco Espanola, No. 54 Limon, is in shells at 1,600 feet; its No. 58 is in green lime at 1,970 feet; No. 60-A is in gray lime at 1,935 feet, and No. 61 continues to rig rotary.

Up in San Luis Potosi, in its old San Pedro Field, where, up to the more later years, the deepest wells seeking petroleum were drilled, Mexican Eagle Oil Co. has stopped the drill in its old San Pedro No. 1, which it has been deepening. It is called a dry hole at 5,130 feet, being deep in the Tamasopa lime. The deepening of this old well was more for scientific purposes than anything else. It was originally called a completion back in 1913 at 4,000 feet, Tamasopa. It was reckoned good then for about 15 bbls. at 48 gravity oil (evidently filtration), the oil coming from an upper stratum.

June Completions

Well completions in Mexican fields fell off during the month of June, other recent preceding months considered. There were but 59 wells completed, of which 46 were in the northern fields and 13 down in the south fields. Of these completions, 19 belong in the production column; 16 north and 3 south. The new production secured, potential flush, is 33,800 bbls., of which 26,800 belong in the

northern fields and 7,000 bbls. in the south fields.

Company Changes

An official announcement is made by Credito Petrolero, S. A., that at a recent general meeting of its stockholders the company's name was changed to "Compania Petrolera Francia Mexico, S. A.," and certain changes were voted in the by-laws. The active officers follow: Jean Chautard, vice president and general manager; Ernest Graeser, manager; Adrien Legastelois, secretary-treasurer and manager. Mr. Chautard is a distinguished French geologist, while both Mr. Graeser and Mr. Legastelois are well known here, having been in charge of the older company's interests for sometime. The company has production in the northern fields and conducts a conservative but regular drilling program.

From Mexico City comes the official announcement from the offices of the Pierce Oil Corp. that William H. Mealy, for many years active vice president of that interest, and president of the Pierce company's drilling subsidiary, Cia. Mexicana Combustible, S. A., has resigned Mr. Mealy is followed by Gayle A. Steele, an old official of the Pierce Corp. in the United States. Mr. Steele in his announcement confirms as manager of the Combustible company, resident in Tampico, Charles Sinsheimer, well and favorably known to the petroleum fraternity in this district.

CALIFORNIA FIELDS

(Continued from Page 48)

anticipated, drilling will probably be continuous during the coming summer. The Superior Oil Co. has just spudded in No. 1 Massor, an outpost, and has a fairly good chance of securing commercial production. The McGinley Oil Co. recently spudded in No. 22, while the St. Helens Petroleum is building a rig for No. 13 Monterey, which, when spudded in, will give the company three drilling projects in this field. The Standard is hauling in material and will start rig construction on two new wells, No. 4 Howard-Smith and No. 69 Baldwin, both of which will undobutedly be started down to the pay before the close of the current month.

Fullerton

The Chanslor-Canfield Midway Oil Co. will, barring the development of mechanical trouble and the picking up of an unfavorable formation, probably establish a new world's rotary drilling record as far as depth is concerned. The company's deep test, No. 96 Olinda in the Fullerton Field is at the present time down 7,476 feet and, although progress is being temporarily delayed due to the loss of some cones, it is believed that drilling will be resumed soon as they are being successfully fished out. The St. Helens Petroleum is making preparations to offset the Chicksan's Robinson property in the Coyote Field and material will be on the ground early next week for No. 5 Anderson. The St. Helens has not undertaken any development work in this district for the past several years, due to the rather unfavorable conditions existing within the industry during this period.

The Union's No. 57 Graham & Loftus is the deepest drilling project at Coyote at the present time and, since the formation is quite favorable and the water situation taken care of, the outlook at 5,760 feet is not discouraging despite the depth of the hole. The Standard listed two completions in the Richfield district during the nearly part of the week, the most important of which was probably the company's No. 1 Anaheim Union because of its location in the field. This well was considered out of the money when started and, although it was an outpost or semi-wildcat, it is now on steady production pumping 200 bbls. daily. It registered an initial of 380 bbls. of 16.7 gravity oil from 3,210 feet and, although the output is still cutting around 25 per cent, the water can be bled out of the run tanks quite freely. Geologists familiar with the area did not expect the well to show anything in the upper sand and stretched a point on the possibility of getting the pay lower down. As a result of its completion, the field has been extended several hundred feet but it is hardly likely that it will lead to any considerable amount of work as the acreage is held in large blocks, principally by the Union. No. 21 on Kraemer lease No. 2 in proven territory was the Standard's other contribution at Richfield during the past 10 days. This well came in pumping 175 bbls. of 20.2 gravity oil from 4,735 feet but, instead of dropping off it has built up until it is making 265 bbls. on the beam at the present time.

Ventura Avenue Field

The Bolsa Chica's No. 1 Hartman in the Ventura Avenue Field, which came in during the early part of the week making between 800 and 900 bbls. of clean 30.6 gravity oil and approximately 1,000,000 feet of gas daily, is still maintaining its initial flow. The well, which extended the outter limits of the district about 2,000 feet northward, was drilled to 5,434 feet and is flowing with a little better than 1,000 feet of open hole. It is the intention of the company to deepen the well and finish it properly by inserting an oil string as soon as the high gas pressure permits the resumption of work. This new well is an offset to No. 1-A Barnard of the General Petroleum, now drilling, and No. 3 Hartman of the Associated, recently completed doing 750 bbls. from 5,265 feet. The Bolsa Chica's lease, which consists of 60 acres, will be developed systematically, the next well being one location or 425 feet west of the initial completion.

G. J. Magenheimer was perhaps watching the outcome of the Bolsa Chica well closer than any other operator because of the fact that his No. 1 Hartman lies several hundred feet still further north. This well, which is at the present time drilling ahead in a hard shell at 3,575 feet, should, unless the structure dips very fast between these two locations, pick up the top gas zone within a short time. The McKeon Oil Co. holds a lease on 80 acres adjoining the Magenheimer property on the north and it is believed that the McKeon interests will undertake early work as the lease stipulates that drilling must be under way within 60 days from completion of the Bolsa Chica well. In the central part of the field four new wells were spudded in during the week, two by the Shell and one each by the General Petroleum and Associated. The next producer expected in is No. 3-A Barnard of the General Petroleum, although No. 9 Notten of the same company is showing all kinds of life at 5,350 feet.

Midway-Sunset

The Honolulu Consolidated finished the best well completed in the Midway-Sunset area during the past week when No. 38 in Section 8-32-24 was turned loose from 3,162 feet. It came in flowing 571 bbls. of 26.5 gravity oil, the output cutting approximately 2 per cent. In Section 4-32-24, the company brought in a 55-bbl. pumper when No. 12 was put on the beam at 3,303 feet. The Standard experienced a rather busy week, four wells being completed during this period, three on Section 29-31-24, and the other in Section 19-31-24. The latter was No. 46, a 142-bbl. pumper from 4,305 feet, the hole being finished with a 6⅝-inch. Nos. 2 and 4 in Section 29-31-24 were good for 158 bbls. and 249 bbls., respectively, the former being drilled to 4,627 feet, while the latter was put on the beam at 4,584 feet. No. 7 in the same section registered an initial pumping of 190 bbls. from 4,460 feet.

King Gillette brought in two more shallow wells in Section 21-31-22, both of them, No. 3-A and No. 11-B, being put on the beam at 900 feet and starting off at 25 bbls. The Bell Evans Oil Co. completed a 120-bbl. pumper when No. 4 in Section 35-32-23 was put on the beam at 3,173 feet. The Balboa Oil Co. increased its daily production 400 bbls. through the instrumentality of No. 55 in Section 24-31-23. This new well, which was put on the beam at 3,863 feet, is making clean 25.7 gravity oil. The Associated's No. 23 in Section 32-31-23 registered an initial pumping of 118 bbls. from 2,806 feet, this being about the average well production for the immediate area.

The Pan American got a fairly good producer in the Elk Hills Field as a result of the completion of No. 41 in Section 1-31-24. This new well came in doing 450 bbls. from 3,247 feet, the hole being finished with an 8¼-inch oil string. The Chanslor-Canfield Midway Oil Co. was agreeably surprised when its No. 16 in the old Kern River Field in Section 9-29-28 came in pumping around 25 bbls. instead of making about 10 bbls. a day, which most of the neighboring wells have been doing. The company's success was due, no doubt, to the fact that the entire 870 feet of hole was 20 inches in diameter, the oil string consisting of 15¼-inch casing. The advantage of drilling large holes in this field is quite obvious in view of the fact that a much larger drainage area is secured and this permits more of the heavy oil to come into the hole.

SOUTHERN CALIFORNIA WILDCATS

Although the Union Oil Co. has already passed the 4,400-foot level in its No. 1 Bryant at Seal Beach, the well's log does not show anything more promising than a few slight gas showings higher up in the hole. This wildcat cannot be classed as a duster under 5,000 feet, although it should soon pick up the sand found by the Shell between 4,500 and 4,700 feet. The Marland's test in this area is drilling ahead in a sandy shale at 4,300 feet and, although it, too, has failed to develop anything of importance to date, it still has a chance.

The Marine Oil Corp. is rigging up No. 1 Strong in the Bellflower Artesia area, Section 24-3-12, and spud will probably be made within the next few days. No. 1 Howland of the Union, west of the Inglewood Field, is drilling ahead at the present time in a sandy shale at 3,210 feet and, although some had anticipated the development of a shallow sand, this was apparently not the intention of the company, as evidenced by the fact that the well was started with a 16-inch hole. There were no further developments in the Manhattan-Hermosa Beach area during the week, except that both George W. Johnson and the Julian Petroleum have resumed drilling.

Fullerton Area

The Union has two rather interesting wildcats in the Fullerton area, both located on the Olinda property and, although No. 1 at 5,242 feet has not yet shown anything, it might be well to watch No. 2 during the next few weeks. The latter is down 4,130 feet and, although field reports failed to show any evidence of an oil showing, it is known that the company took several core samples last week and is at the present time running in a string of 8¼-inch. This casing may only be for protective purposes but do not be surprised if this outpost is given a test in the near future.

The Barnsdall is making fairly good progress with its wildcat at Avocado Heights in the Puente district, the hole being down 2,860 feet early this week. The Standard is also stepping right along with its wildcat work, No. 1 University in the San Fernando Valley having just passed the 3,028-foot level, while No. 1 Austin, a cable tool job in Topango Canyon, is going ahead at 705 feet. No. 1 Sesnon of the Petroleum Securities near Zelzah in the San Fernando Valley is rotating ahead in a sandy brown shale at 1,770 feet, there being no showings of importance to date. The Milham Exploration Co. is abandoning its wildcat work in the Newhall-Saugus area after drilling two fairly deep tests on the Conroy property in that vicinity. No. 2 in Section 11-4-16, was carried down to 3,985 feet, at which point it has been abandoned because of the unfavorable outlook.

New Wildcat Operations

New wildcat operations undertaken during the week include the erection of a rig approximately 4 miles east of San Juan Capistrano midway between Los Angeles and San Diego in Section 2-8-8 by the California Petroleum Development Co. and the staking of a location for a prospective test by the Cardiff Oil Co. in Section 24-13-4, San Diego County. The most important work undertaken during the week was probably that started by the Associated in the district east of Inglewood, where the company has leased up some 600 acres of prospective oil land including the 120-acre tract of the Potrero Country Club. The company has material on ground for this wildcat, No. 1 Cypress, which is located about half way between the Union's No. 1 Wagner and the Standard's No. 1 Potter & Smith, both of which were dry holes. The new location is also found to be a little over half a mile southwest of No. 1 Connelly of the Marland and about a mile due south from No. 1 Farrell of the Standard, both dusters. This general area has been fairly well tested out, although the Associated's acreage is large enough to permit the opening up of a new structure in between the various wildcats abandoned in the past. No. 1 Cypress will be located on high ground, the Potrero lease covering part of the highest hill between Culver City and the Huntington Beach Field.

NORTHERN CALIFORNIA WILDCATS

The recent deal between the Shell and Miller & Lux, Inc., involving acreage in Kern, Kings and Tulare Counties and the successful bid of the Petroleum Securities, a Doheny holding company, for the John Enos property, in Kern County, opens up a considerable amount of acreage for intelligent development during the coming year. The Shell Co. secured the exclusive privilege of wildcatting any and all of the Miller & Lux land, which extends east and west approximately 60 miles and north and south about 25 miles. The Shell paid Miller & Lux, Inc., a cash bonus of $1,000,000 and, while this seems a rather large bonus, the vast amount of potential oil land involved makes it a good transaction to both parties. The Shell has been geologizing practically the entire state during the past few years, particularly the San Joaquin Valley, where it is expected the future California oil fields will be developed. This company, which has thousands of acres under lease in addition to those recently acquired from Miller & Lux, is probably the only concern in the state using scientific methods in conjunction with geological data, and while only a limited amount of work has been done to date with the seismograph and torsion balance, it is, nevertheless, using these instruments in a small way.

The Petroleum Securities bid $500,000 for the various properties held by the John Enos Estate consisting of 7,040 acres in 11 sections northwest of Bakersfield, some of the land being in the Mt. Poso area. The bid was accompanied by a certified check for $50,000, representing 10 per cent of the purchase price, and it only remains for the Kern County Superior Court to confirm the deal. The Shell's discovery well in the Mt. Poso Field, by the way, has just passed the 3,100-foot level and, while no deeper horizon has been developed since passing through the upper zone at 1,922 feet, hope is still held out inasmuch as the formation continues favorable. Several additional wells, outposts and wildcats in this vicinity are getting under way, but, due to the difficulty experienced in securing water, it will probably be several weeks before any of them are in a position to pick up the Vedder sand, as the present productive horizon will probably be designated.

To Test New Area

The Ozena Oil Co. is making preparations to drill a wildcat in the vicinity of Delano near the Kern, Tulare County, line, where it has 560 acres under lease. John Walklin of the Walklin Petroleum has leased up in excess of 5,000 acres in this area, which he believes will prove productive as a result of work done during the past year. The Union ran into a little fishing job in its No. 1 Theta, west of the Belridge Field, at 2,570 feet but the delay will probably be only of a temporary nature. The Associated at Huron is also held up with mechanical trouble resulting from the loss of several stands of pipe which twisted off at 2,260 feet.

The Standard, after a considerable amount of preliminary survey work which involved the drilling of several

XUM

No more uncontrolled oil or gas wells

BAROID, when properly used, will prevent gas from blowing the liquid out of wells while drilling is under way.

Baroid possesses wonderful arching qualities. It contains barytes having a high specific gravity and so treated as to remain in suspension in oil or water.

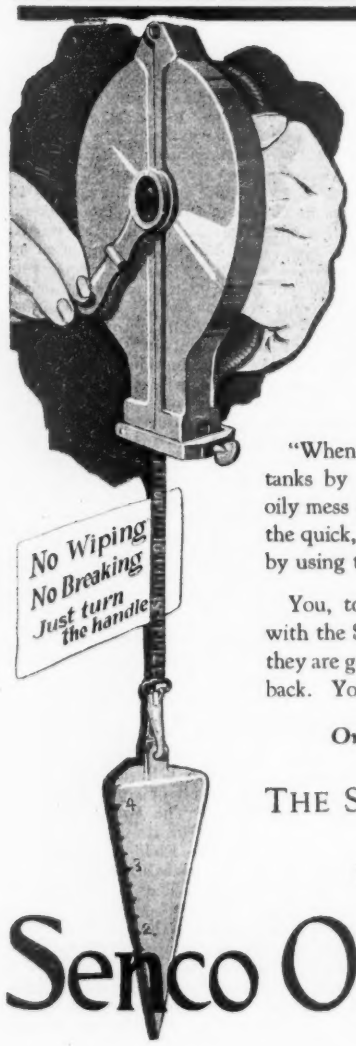
BAROID

(fully covered by Stroud Patents)

Warning: The use of barytes (and also iron oxide) in the drilling, handling and operating of oil and gas wells is fully covered by the Stroud Patents. (United States Patent No. 1575944).

Dealers and users are warned that the use of barytes or iron oxide in gas or oil wells will be enjoined unless these materials are purchased through a licensed distributor.

NATIONAL PIGMENTS & CHEMICAL CO.
St. Louis, Mo.



"I wouldn't be without— a SENCO OIL GAUGER"

LIKE most modern devices, once you have tested the advantages of the SENCO OIL GAUGER you will wonder how you got along without it before.

"When I realize how much time it took to gauge tanks by the old method, to say nothing of the oily mess and broken lines, I wish I had known of the quick, clean and economical way made possible by using the SENCO."

You, too, can modernize your gauging methods with the SENCO. Try one. You can't loose because they are guaranteed to give satisfaction or your money back. You'll want them for all your gaugers.

Order from your dealer or direct

THE STATES ENGINEERING CO.
600 E. LOMBARD STREET
BALTIMORE - MARYLAND

Senco Oil Gauger

structure holes, has located its first deep test at Camarillo in Ventura County and will spud in within the next few days. The structure survey work has tended to indicate that the basalt is only an overlap and that there is a possibility of developing commercial production, notwithstanding the fact that this area has been condemned by several geological surveys. The company's No. 3 Valentine at Montalvo, a structure hole, is logging a coarse gray sand at 1,792 feet.

The Shell's wildcat at Moorpark, No. 1 Berlywood, is rotating ahead in a hard conglomerate at 4,378 feet and, since this hole has not shown any favorable indications to date, the outlook is rather doubtful. E. J. Miley is building a steel derrick at Golita in Santa Barbara County in Section 3-4-29, and an early spud is expected. The most interesting test in Monterey County is perhaps the Pan American's wildcat in Section 27-23-13, which is rotating ahead in a blue shale at 1,250 feet. The Shell's No. 1 Murphy in the vicinity of Petaluma is reported down 1,290 feet, the formation being a hard sandy shale. H. N. Witt's shallow well in this region is making approximately 15 bbls. a day on a 12-hour pumping tour.

GULF COAST FIELDS

(Continued from Page 44)

ion Co.'s No. 11 Taylor is working over at 3,850 feet and No. 19 Taylor is rigging. The Texas Exploration Co.'s No. 10 Dooley is at 975 feet. J. F. Bashara's No. 1 fee is around 700 feet. The Rio Bravo Oil Co.'s No. 3 P. F. Settegast is rigging with a location for No. 2-P Settegast. These are on the west flank of the dome.

Other Pools

At High Island in Galveston County, the Gulf Production Co.'s No. 2 Smith is at 2,465 feet and No. 5 Smith is around 4,675 feet. This dome is close to the Gulf of Mexico and the tests drilling are on the south side of the uplift, between it and the Gulf. The Sun Oil Co.'s No. 8-C Cade is at 4,375 feet and No. 9 Lockhart is below 400 feet.

The Harrison Oil Co. set 6⅝-inch casing in No. 2 Schlener on the southwest flank of the old Dayton Pool in Liberty County at 4,206 feet and will test a showing in a shale and sand formation. The Poor Boy Oil Co.'s No. 2 Pruitt on the east side of the dome is shut down.

On the northeast flank of the Boling Dome, the Sun Oil Co.'s No. 2 Farmer is at 900 feet with The Texas Company rigging No. 1 Farmer. On the northwest side, The Texas Company's No. 8 Taylor is around 4,186 feet. No. 1 Felder abandoned at 3,434 feet.. The Vacuum Oil Co. quit No. 1 Hooper in rock salt at 5,315 feet. Salt has been found at very low depth in Coastal Pools before but it is unusual.

The Rycade Petroleum Corp.'s No. 2 Kountze on the south side of the Markham Pool, is below 2,425 feet. The Houston-Gulf Gas Co.'s No. 1 Kountz, 2 miles west of the Pool, is around 510 feet.

The Gulf Production Co.'s No. 7 Moore, Orchard Dome, is around 2,800 feet. The Rycade Petroleum Corp. is drilling Nos. 7 and 8 Wisdom and 8 and 9 Nash off the Nash Dome on the line of Fort Bend and Brazoria Counties. No. 8 Nash is the deepest hole, drilling below 4,015 feet.

The Bennett Production Co. is drilling No. 3 Barber on the north flank of the Barber Hill Dome in Chambers County, 12 miles northeast of Goose Creek.

South Louisiana Pools

The Gulf Refining Co.'s No. 25 Bright-Penn in the Edgerly Pool is drilling below 3,100 feet. The Rex Petroleum Co.'s No. 3 Hunter is around 3,275 feet. The Drysdale-Savoy Oil Co.'s No. 2 Hill is around 3,000 feet.

In the Jennings (Evangeline) Pool, F. I. Getty's No. 3 Clement is around 1,900 feet. The Jennings Petroleum Co.'s No. 1 Medlenka is around 2,280 feet and the Port City Oil Co.'s No. 6 SFS is at 1,315 feet. The Texas Company has a location for No. 1 Rayne. The Coastal Oil & Fuel Co. has a derrick up for No. 92 fee.

The Vacuum-Gulf Co.'s joint No. 7 Miller in the Lockport Pool, near Lake Charles, is going on the pump at 4,375 feet. No. 8 Miller is fishing at 3,825 feet. No. 10 is drilling below 3,610 feet and No. 11 Miller is below 3,823 feet. A location has been made for No. 12. No. 1 Friedberg Wolf is deepening at 5,480 feet. No. 4 Lock-Moore is around 5,300 feet. No. 3 Bordages is below 2,010 feet. Nos. 1 W. G. Farquhar and 1 Bayou D'Inde are rigging.

Wildcats and Semiwildcats

Some students of conditions in the Gulf Coast region and the Texas fields believe wildcat operations should be checked for a time to forestall a cut in crude prices. They point to the recent large wells in the Coastal Pools, the new pool west of Mexia, increasing operations in the Panhandle, extensions in Reagan and Upton Counties and the Mirando districts as threatening a flood of crude and consequent lower crude quotations.

The more optimistic say the market is in a position to absorb all the crude these districts may produce and claim refiners are now drawing on stocks. However, the warning as to overproduction must come from some authoritative source, such as an executive of some major company and even then it will probably be ignored, as it has been in the past.

Around the Hawkins Dome in Matagorda County, the Gulf Production Co.'s No. 1 Sanborn is in lime rock at 2,900 feet. No. 1 Parkinson is about 2,475 feet in gumbo. At Van Vleck, the Gulf Co. is drilling No. 1 Turner and the Humble Oil Refining Co. No. 1 Robins. The Shepherd Mott Oil Co.'s No. 2 Hawkins at Hawkins is fishing at 3,135 feet.

Around the Fanette Dome in Jefferson County, the Gulf Production Co.'s No. 2 Bordages is below 3,655 feet in gumbo. No. 8 Thomas is in cap rock at 1,420 feet. At Big Hill Dome, the Houston Oil Co.'s No. 2 Sun-Dyson is drilling in cap rock at 1,155 feet. No. 1 Pipkin-Davis is below 2,940 feet in sandy lime rock. The Port Arthur Development Co.'s No. 3 near Westbury is sidetracking at 1,600 feet.

In Harris County, Benedum & Trees' No. 1 Kennedy, southeast of the Humble Pool, is at 2,960 feet in hard lime rock. One of the 60-horsepower boilers used for power at this test exploded Friday morning. Members of the crew escaped injury. Claude Smith is the contractor on this test. The Brain Oil Co.'s No. 1, north of Spring, is around 1,500 feet. Bancroft and associates have resumed drilling No. 1 Haney, east of Elena, the bit being below 3,300 feet. Kelley and others' No. 1 Lipper, near Aldine, is below 2,000 feet and the Kane Production Co.'s No. 1 Foster near Huffman is below 1,765 feet.

In Brazoria County, the Roxana Petroleum Corp.'s No. 2 Clements, Clements Dome, is around 2,409 feet and No. 2 Allen Dome, is at 4,810 feet.

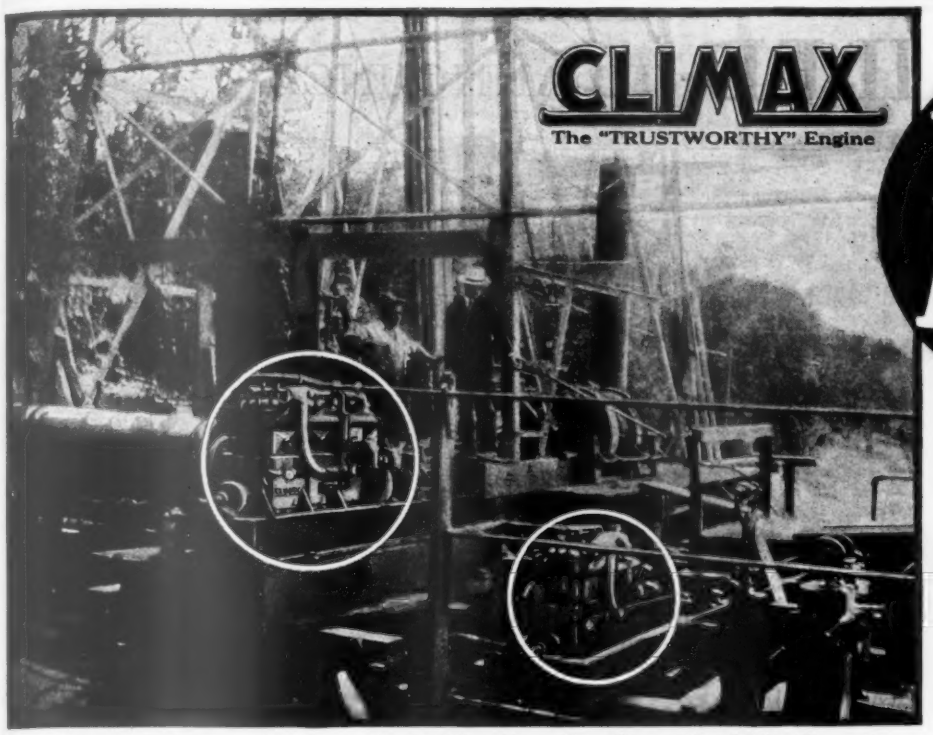
In Orange County, the Brownie Babbittee Oil Co. is rigging No. 1 Lake Shore 6 miles southeast of the Orange Pool. The test at Gum Island is still idle. In Liberty County, the Sun Oil Co.'s No. 3 Masterson, at Felicia, is around 2,310 feet. George Newman is drilling No. 2 near Pattison, Waller County.

In Chambers County, The Texas Company's No. 2 League, 6 miles northwest of Wallisville is drilling around 800 feet. W. C. Moore's No. 4 Blecke, near Winnie, is idle at 1,225 feet in gumbo.

Reports from the wildcats drilling in the south Louisiana parishes are without any special significance other than that good progress is being made with the various holes.

In the Rockdale-Minerva shallow sand field in Milam County, the Jennings Oil Co. started No. 18 Branch and the Texas Petroleum Development Co. No. 6 Phillips.

In addition to the wells drilling and reported above, the Humphrey Corp. set 8¼-inch casing in No. 1-A Bashara at Sour Lake at 3,205 feet. The Bashara



Climax Engines provide Power for Drilling, Pumping, Generating Light Current, Operating Air Compressors for Flowing or Cleaning Out, Compressors for Extraction of Gasoline, Operating Water Stations, Fire Pumps, Collecting or Pipe Line Pumps, or for any other purpose where dependable, economical Power is required.

Just the POWER for OIL FIELD WORK

View at left shows
Climax R6U Engine Operating Rotary Drill
Climax R4U Engine Operating Mud Pumps, Small Grinder and Driller

The Stone Drill Corporation, Glendale, California, operating Associated Oil lease, Seal Beach, California, operates **five** of these Climax-powered rigs in various parts of California. This rig may be seen in operation now.

Easy portability, sturdy dependability, flexibility in drilling, speed in pulling tools and operating economy combine to make Climax Engines just the Power for Oil Field Work.

Write for Bulletins E and H

CLIMAX ENGINEERING CO., 32 W. 18th Ave., Clinton, Iowa

Mid-Continent Office:
Wells Hotel, Tulsa, Okla.

California Field Headquarters:
Coast Machinery Corporation, 464-66 E. 3rd St., Los Angeles, Calif.

A heat exchanger and condenser in one—

The G-R Sectional Condenser

With two sections, water can be used as the cooling medium in one unit and oil in another, thus providing a condenser and heat exchanger in one set.

Furthermore, a different "cut" or "fractionation" can be made in each section by offsetting the lower vapor connection to the side of the shell and draining the distillate from the sump thus formed in the vapor space.

And note, too, the many operating advantages of this arrangement. Sections can be added or removed to meet varying capacity requirements. The complete unit is readily transported and assembled if necessary to meet changing plant conditions. Inspection and cleaning is greatly facilitated.

Send the coupon for full information

THE GRISCOM-RUSSELL COMPANY

Dept. J, 285 Madison Avenue, New York

Philadelphia	Chicago	St. Louis	San Francisco
Boston	Detroit	New Orleans	Los Angeles
Rochester	Cleveland	Dallas	Seattle
Pittsburgh	Milwaukee	Houston	Salt Lake City
Columbus	Minneapolis	Atlanta	Tulsa
Indianapolis	Kansas City	Charlotte	Denver

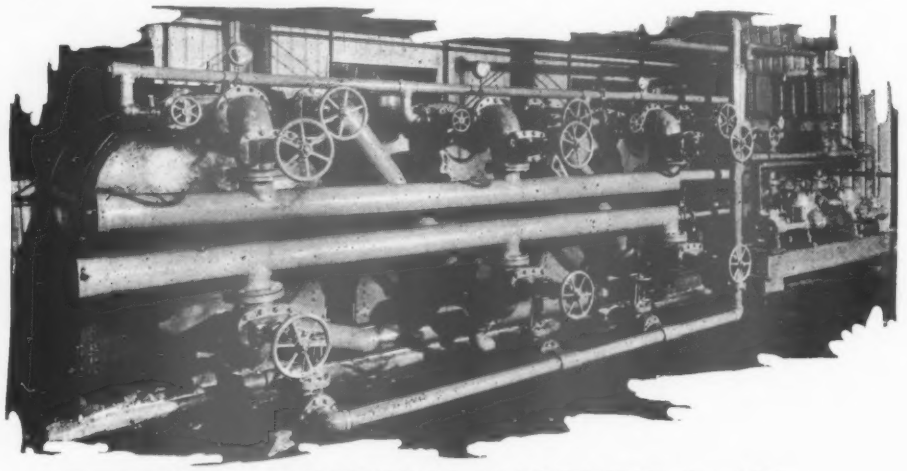
For Canada: Riley Engineering and Supply Co., Ltd., Toronto

REG. U.S. PAT. OFF.

Name .....
Address .....
The Griscom-Russell Co., Dept. J, 285 Madison Ave., New York
Please send full information on the G-R Sectional Condenser
O&GJ 7-22-26

WE FAILED TO ANNOUNCE

The Advent of



PORTABLE CHARCOAL GASOLINE PLANT

NOT through oversight but BECAUSE we wanted actual proof that the plant would do what we thought it would do.

BEHIND THESE PLANTS is the experience of building and operating charcoal gasoline plants for four years.

WE HAVE AIMED to have

PLANTS AVAILABLE FROM STOCK

but they buy them as fast as they leave the shop.

You Investigate the Portable Charcoal Gasoline Plant

THE BALTIMORE GAS ENGINEERING CORPORATION
Managers

GASOLINE RECOVERY CORPORATION, Charleston, W. Va.

Tulsa Office
427 Wright Bldg.
Tulsa, Okla.

"We buy these (McKim) gaskets for the particular purpose of insuring safety to our employees and freedom from fires.

(From a Hoosier Refiner.)

McKim Metallic Asbestos Gaskets—For Oil, Water, Gas, Chemicals, Etc.

Catalogue No. 17 on Request

McCORD RADIATOR & MFG. CO.
Gasket Division
DETROIT, MICHIGAN

Manufacturers of McCord Force Feed Lubricators

New!

DIXON'S ALUMINUM-GRAPHITE PAINT

THIS has been prepared primarily to meet the special requirements of gas, oil and industrial companies and is particularly recommended for use on gas-holders, tanks or wherever a light colored paint is required.

Back of this new product stands our century-old reputation, as well as 65 years' experience in paint manufacturing.

Dixon's Aluminum Graphite Paint is composed of aluminum and flake silica-graphite as a pigment and boiled linseed oil as a vehicle. The aluminum is of flake formation and thus easily combines with the flake graphite. These flakes, lapping over like fish scales, provide a covering of unusual elasticity and durability.

The value of flake graphite as a pigment has been thoroughly proven and is generally accepted. The combination of aluminum and graphite results in a point that is not affected by gases, fumes, and which resists sunlight, air and moisture. Reflecting light and heat, it will keep the temperature of tanks, etc., considerably lower than is possible with darker paints. Ask for Circular AB-188.

Additional information and prices will be sent upon request.

DIXON'S Red Lead-Graphite Primer

The pigment of this Primer consists of flake silica-graphite, red lead and high-grade oxide of iron. The vehicle is the best boiled linseed oil obtainable.

Dixon's Red Lead - Graphite primer has the good qualities of red lead together with the well-known water-repellent advantages of a silica-graphite paint.

It fully meets the needs of those who require a red lead paint for priming coats.

DIXON'S Silica-Graphite PAINT

consists of the pigment, flake silica-graphite and the vehicle, boiled linseed oil. The pigment is inert, aids in preserving the elasticity of the paint, increases the thickness of the paint film, and has long life. It will not peel, crack or flake off. For over 65 years it has demonstrated its superiority as a long service protective paint.

Joseph Dixon Crucible Co.

Established 1827 Jersey City, N. J.

Oil Co.'s No. 1 fee there is around 3,460 feet.

Barbee and others' No. 1 Garrick at Spindletop is around 2,235 feet.

The J. S. Abercrombie No. 1 West-Schenck extends that pool 500 feet to the south of the dome.

The territory north of the Humble Co.'s well on the Welder acreage on the west side of the South Liberty Pool, has been proven on the salt. The nearest possible offset to the south would be 1,500 feet from the well. The Texas Company, Gulf Co. and other smaller companies and individuals have strips south of the Welder, but it is doubtful if any tests will be started there on account of the great distance from the last producer. That distance is usually considered out of range around these Coastal saline domes.

The production at the end of the week in the deep sand section at Spindletop was as follows, compared with last week:

Wells	July 17	July 10
Yount-Lee Oil Co.:		
No. 3 Gladys	150	150
No. 4 Gladys	700	800
No. 5 Gladys	4,000	5,700
No. 2 McFadden	.....	75
No. 3 McFadden	150	450
No. 4 McFadden	100	160
No. 5 McFadden	950	900
No. 6 McFadden	1,400	1,700
No. 1 Davis	7,000	9,500
Sun Oil Co.:		
No. 1 McLean	3,500	4,500
Hines Brothers:		
No. 1 Quinn	2,500	3,500
Gulf Production Co.:		
No. 1 Weed	3,000	2,800
Total: Wells, 13	23,450	30,235

The Rio Bravo's No. 1 T. & N. O., a 3,000-bbl. well initial came in too late to be included in the summary of the gross for the week. Adding this well brings the total to 26,450 bbls., or 3,785 bbls. less than the combined output late last week. The old cap rock production brings the gross for the pool up to an average of 24,000 bbls.

CANADIAN FIELDS

(Continued from Page 56)

tion 18-20-2w5, is drilling through the cement at the bottom of the casing, at 3,546 feet. No. 3, LSD 10, Section 13-20-3w5, is fishing for casing at 3,345 feet. No. 5, LSD 16, Section 30-19-2w5, is drilling at 210 feet for the 20-inch casing.

Cooper Nanton Oils, LSD 2, Section 7-20-2w5, is at 600 feet and drilling for the 15½-inch casing. New McDougall-Segur Oil Co., LSD 14, Section 12-20-3w5, cemented the 20-inch casing at 129 feet and is drilling at 245 feet. New Valley Oil Co., LSD 4, Section 6-21-2w5, has shut off most of the surface water and is drilling around 55 feet. Advance Oil Co.'s No. 2, LSD 14, Section 20-19-2w5, has drilled through the cement at the bottom of the 20-inch casing and is now drilling for 15½ inch casing at 210 feet. The surface water was shut off at 68 feet with the 24-inch pipe. Advance No. 1, same section, is working on casing at 3,200 feet.

Dolomite Oils, LSD 8, Section 1-20-3w5 has timber for derrick and material for bunkhouses on the site. Homestake Oils, LSD 5, Section 3-20-3w5, has purchased derrick timbers and drilling equipment. Rainier Oils, Ltd., financed largely by British Columbia capital, has a tentative location in LSD 8, Section 11-20-3w5. Belgo-Canadian Oils, Ltd., which some time ago took over the old Record Oil Co.'s deep test in Section 4-19-2w5, is being reorganized, preparatory to active work on the completion of the test, now standing at 4,327 feet. Stockmen Oils, Ltd., LSD 1, Section 27-20-3w5, has drilling equipment on location and is reported rigging up. Spooner Oils, Ltd., Section 13-20-3w5, has a derrick up and is moving drilling equipment to the location. Unity Oils, LSD 15, Section 34-19-3w5, is securing drilling equipment for its test.

Calmont Oils, LSD 2, Section 1-20-3w5, is reported drilling at 100 feet. Dallas Oil Co.'s No. 1, LSD 11, Section 20-19-2w5, is drilling at 1,810 feet. Home Oils, LSD, Section 2-19-2w5, is cementing casing at 1,100 feet. Highland Oils, LSD 5, Section 5 20-2w5, is drilling at 160 feet. Queen City Oil Co. has a location, LSD 6, Section 34-20-3w5.

In the Moose Mountain Field, Reserve Oils' No. 1, Morley Indian reserve, is at 1,200 feet with a diamond drill test, and drilling. The first show is expected in the top of the Dakota around 1,500 feet. Signal Hill's No. 2, LSD 9, Section 34-23-5w5, is at 90 feet and drilling.

Pinnacle Oils, Ltd., which has a location in the Turner Valley Field in LSD 9, Section 34-19-2w5, has made a new location on the Springbank structure, 12 miles from Calgary. This test is the closest location to the city of Calgary. It will be drilled in southwest quarter of Section 24-24-5w5, a mile east of Springbank. It is 1½ miles north of the Sarcee well, drilled by A. W. Dingman in 1907. The Sarcee test got a show of gas at 765 feet, a show of oil at 1,660 feet, and a fair flow of gas at 2,300 feet; but had to be abandoned owing to a difficult fishing job. In the same area, the Horseshoe Oil Co. has a location in Section 16-24-5w5.

Highwood Petroleum & Natural Gas Co., headed by A. W. Dingman, has secured from the Dominion government a concession covering the oil and natural gas rights on the Sarcee Indian reserve, between 12 and 15 miles southwest of Calgary. The drilling, personally superintended by A. W. Dingman, will be commenced this summer, standard tools being used. The company's leases in the Highwood district are being tested by Imperial Oil, Ltd.

On the Sinclair structure, Banner Oils, Ltd., has made a definite location in LSD 7, Section 34-17-3w5, 100 yards east of the old Calgary, Alberta, well. The latter, in LSD 6, Section 34-17-3w5, will be completed by Jewel Oils, Ltd. A heavy duty standard outfit will be used for the Banner test.

Medicine Hat Field

In the Medicine Hat Field, the Roth Syndicate, which recently abandoned No. 1 deep test in Section 31 d2-5w4, has made a tentative No. 2 location in Section 17-13-6w4. No. 1 deep test indicated, by striking water, that it was located too low on the structure. It is reported that the Roth syndicate is also planning to complete the unfinished test of the Medicine Hat Petroleum Co. at Bull's Head, in addition to his No. 2 test in the Redcliffe district.

In the Border Field, Hyde Park Oils, Ltd., is planning to drill a test for oil near the Rogers-Imperial gasser in Section 29-1-11w4. On the Montana side, Pondera Valley-Larson Oil Co. of Saskatoon, is reported to have got the oil sand in No. 2 well. Cope Development Co.'s No. 1, Section 23-35 2w, is testing production. No. 2 is drilling in Section 35-35-2w and No. 3 in Section 23-35-2w has spudded in. Rose Oil Co.'s No. 13, Section 31-35-1w, is reported good for 50 bbls. a day. No. 14 has spudded in.

In the Fraser Valley, British Columbia, the Empire Natural Gas Co.'s deep test, 35 miles east of Vancouver, is reported fishing at 5,743 feet, the rotary stem having broken off 2,000 feet from the bottom. The Empire test is the deepest in Canada. It started with 12-inch casing, and the 10-inch was carried to only 1,000 feet. In the same field, 15 miles west, the Sumas Oil & Gas Co. is drilling a new test at 400 feet.

In Manitoba the Manitoba Mutual Oil & Development Co. is drilling a test for oil and gas in the Treherne-Holland district, about 85 miles southwest of Winnipeg. Shallow gas production sufficient for lighting and cooking was developed in this district some years ago. The Manitoba Mutual test is drilling at 600 feet with a 12½-inch hole, the drill being in the Benton shale. Production is expected in the Dakota formation, which may lie at 800 to 1,000 feet.

In Ontario, a syndicate headed by Dr. E. B. Blain of Hamilton is drilling a series of shallow tests in Plympton Township, north of the Petrolia Field. No. 1, on the Carter farm, and No. 2 on the old Murray farm were abandoned on account of salt water. No. 3 finished around 450 feet and was shot, and is reported to have a fair pumping production. Further tests will be drilled.

The TRUMBLE

IS A SEPARATOR NOT A SETTLING TANK!

Write us for full information.

TRUMBLE GAS TRAP COMPANY
801 Higgins Bldg., Los Angeles, Calif.

Eastern Representative: C. F. CAMP
221-23 E. Archer Tulsa, Oklahoma

It's An Easy Job With "Toledos"

Can your operators thread 2" pipe in a trench operating the tool with one hand and holding the pipe steady in a pair of tongs with the other hand?

It's an easy job with a "TOLEDO" No. 1A tool.

Use the coupon and let us send you the new "TOLEDO" catalog showing the finest line of pipe tools made.

The Toledo Pipe Threading Machine Co.
Toledo, Ohio
NEW YORK OFFICE
72 Lafayette St.

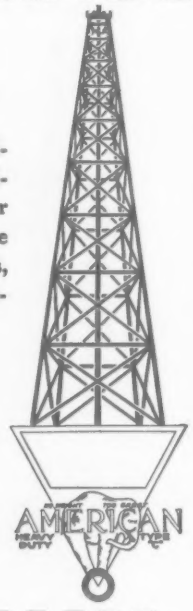
Send me a copy of the "TOLEDO" Catalog.
Name.....
Street.....
City.....
State.....

O. G. J.

AMERICAN
HEAVY DUTY TYPE "C"
ROLLER BEARINGS

An Offer to Any Oil Man

Our special knowledge of conditions is available and our Engineering Cooperation is yours for the asking. If you buy or use Traveling Blocks, Crown Blocks, Reverse Clutches,—get our Catalogue 1006. Use the Coupon.



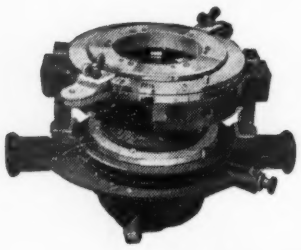
Please send your catalogue No. 1006 to—

Name .....

Address .....

AMERICAN ROLLER BEARING CO.
PITTSBURGH, PENNA.

It Pays to Use Good Tools



"Just for Casing"

No. 30 Beaver

2, 2½ and 3-inch 11½ Thread Casing

No. 30 Beaver is a Ratchet Die Stock built especially to cut threads of 11½ thread pitch only on 2, 2½ and 3-inch tubing or standard pipe. It is built on the same principle as all other self-contained and adjustable Beavers, using narrow receding dies. A gear, such as is used in the large Beavers, is not used in No. 30 owing to the light thread required.

One set of chasers threads all sizes. Instantly adjustable. No loose dies — a feature especially adapted to oil field use.

Six cutting chasers are used thus producing smoother and more perfect joints in this fine thread.

You can buy No. 30 from any leading supply house.

Write for Beaver Catalog and Net Price Sheet.

THE BORDEN COMPANY
514 Dana Ave., Warren Ohio,

BEAVER
"The Easiest Way to Cut Good Threads"

ARTESIA, NEW MEXICO

(Continued from Page 46)

1,780 feet; No. 1, Section 12-17-31, validated hole; Picher Oil Corp.'s No. 3 Cronin permit, Section 12-18-27, to drill deeper; Phillips & Welch's No. 1, Section 35-17-28, drilling 1,600 feet; Swartz-Compton & Eaton's No. 1 Brainard permit, Section 5-18-27, drilling 1,800 feet; Sun Oil Co.'s No. 1, Section 21-25-30, drilling 250 feet; Skelly Oil Co.'s No. 1, Section 22-17-31, drilling 1,100 feet; Shugart and others' No. 1, Section 1-17-31, location; Snowden & McSweeney's No. 2 in Section 33-18-28, flowing from a new pay at 2,540 feet, will drill to the 2,700-foot sand; Bruce Sullivan's No. 1, Section 8-18-31, validation hole; No. 1, Section 1-18-31, drilling 400 feet; Twin Lakes Oil Co.'s No. 8, Section 28-18-28, fishing; No. 9, offsetting Snowden & McSweeney to the north, new location; Merriweather and others' No. 1 Goodale, Section 19-18-29, cleaning out (this was formerly known as the Wade & Bujac well); Wooley & Jones' No. 1 Beeson, Section 33-17-30, drilling 2,482 feet. Colorado Gas & Fuel Co.'s No. 1, Section 16-8-27, fishing below 5,000 feet; Etz-De Vito and others' No. 1, Section 24-11-25, drilling below 650 feet; Gibson Oil Corp.'s No. 1 Forsyth, Section 8-11-23, fishing for collapsed casing at 685 feet; Rogers and others' No. 1 Purcell Sloop permit, Section 14-11-26, no report; Sparrow & Drake's No. 1 Fahrlander, Section 11-6-27, drilling below 650 feet; The Texas Company's No. 1 Dunken Dome, Section 29-17-18, drilling below 900 feet.

Lea County

Cap Rock Oil & Gas Corp.'s No. 1, Section 11-16-32, drilling water well and rebuilding derrick; J. S. Covert's No. 1, Section 15-21-33, drilling below 900 feet; Inglefield and others' No. 1, Section 4-17-34, drilling 860 feet; the Majamar Oil & Gas Corp. has validated 11 permits. T. P. McDonald's No. 1 in Section 22-18-34, building steel derrick and moving tools; Ohio Oil Co.'s No. 1 William Mitchell permit, Section 18-17-32, moving in tools; No. 1 Pearl Miller permit, Section 35-17-32, moving in tools.

KANSAS FIELDS

(Continued from Page 51)

NW cor. SW, Section 6-24-12. Beacon Oil Co. has spudded No. 5 Weirshing, C NW NW, Section 24-26-9. H. L. Spencer and others are drilling at 1,450 feet in No. 1 Kennedy, NE cor. NW SE, Section 21-26-10. Mason & Ralston are shut down at 800 feet in No. 1 Wedelin, NW cor. SW, Section 18-27-11.

Rice County New Work

Douglas & Jones are drilling at 980 feet in No. 1 Johnson, SE cor. SW SW, Section 26-20-6w.

Harper County, Kansas

J. G. Buell has a rig up for No. 1 Caton, NE cor. SW SW, Section 22-34-6w.

Russell County New Work

Derby Oil Co.'s No. 4 Dodge, NW cor. SW, Section 32-11-15w, is drilling at 900 feet. Valerius Oil & Gas Co. has spudded No. 2, SE cor. NE SE, Section 18-12-15w. Rankin and others' No. 1 Loy, C SE SE, Section 28-18-12w, is spudded and shut down.

Butler County Completions

Sheldon, Brennan and others have a dry hole at 2,734 feet in No. 2, NE cor. SW SW, Section 27-26-7. In the Eldorado Field the Empire Gas & Fuel Co. has several completions: No. 95 Cheaney, C NE SW, Section 21-25-5, had sand at 600-622 feet and made 10 bbls. after a shot of 15 quarts. No. 90, CEL NW SE, Section 28-25-5, had sand at 630-644 feet and made 8 bbls. after a shot of 10 quarts. No. 91 Hegberg, C SW SE, Section 28-25-5, had sand at 627-640 feet and made 8 bbls. after a shot of 10 quarts. No. 93 Hegberg, NE cor. SE, Section 28-25-5, made 8 bbls. after a 15-quart shot in sand at 627-644 feet. No. 96 Hegberg, C NE NE, Section 28-25-5, is good for 9 bbls. after a shot of 15 quarts in sand at 620-640 feet. No. 100, C NW NE, Section 28-25-5, made 10 bbls. after a shot of 15 quarts in sand at 643-665 feet. No. 35 Stapleton, C SE, Section 29-25-5, had sand at 629-666 feet and made 10 bbls. after a shot of 15 quarts. No. 21 Brancroft, CSL NE SW, Section 32-25-5, had sand at 634-650 feet and made 5 bbls. after a shot of 15 quarts. No. 50, C SW SW, Section 32-25-5, had sand at 637-649 feet and made 5 bbls. after a shot of 10 quarts. No. 73, NE cor. SW NE, Section 33-25-5, had sand at 2,370-98 feet, and made 187 bbls. naturally.

Reno County New Work

Port Fleeger and the Mid-Kansas Oil & Gas Co. have moved in a rig for No. 1 Nisely, SE cor. NW, Section 35-23-7w.

Kingman County

Allison & Fitzwilliams have a dry hole at 4,293 feet in No. 1, SE cor. NW NW, Section 25-27-7w.

Greenwood County Completions

White Eagle Oil Co. and Phillips Petroleum Co.'s No. 1-A, SW cor. NE SE, Section 19-23-9, made 90 bbls. after a shot of 100 quarts in sand at 2,656-91 feet. The Texas Company and Simmons' No. 2, NE cor. NW SE, Section 8-23-11, had sand at 1,924-2,001 feet and made 30 bbls. after a shot of 100 quarts. Simmons and others' No. 4, NW cor. SW SW, Section 9-23-11, is good for 200 bbls. after a shot of 180 quarts in sand at 1,966-2,012 feet. Manhattan Oil Co. and Phillips Petroleum Co.'s No. 1, SW cor. NE NW, Section 16-23-11, is estimated at 8 bbls. after a shot of 90 quarts in sand at 1,935-89 feet. The Texas Company's No. 1, NW cor. NW, Section 16-23-11, had sand at 1,936-2,016 feet and was shot with 160 quarts and made 35 bbls. Kannon Oil Co. has completed No. 4, SW cor. NE, Section 6-22-10, for 50 bbls. after a shot of 120 quarts in sand at 2,227-55 feet. Hazlett and others' No. 20, SE cor. NW SE, Section 12-22-10, made 200 bbls. after a shot of 320 quarts in sand at 2,062-2,135 feet. Prairie Oil & Gas Co.'s No. 2, NE cor. NW NW, Section 12-22-10, is making 230 bbls. after a shot of 260 quarts in sand at 1,984-2,067 feet. No. 4, NW cor. NW, Section 12-22-10, had sand at 2,006-86 feet and made 150 bbls. after a shot of 320 quarts. Ward McGinnis and others' No. 3, NW cor. SW SW, Section 11-23-9, had sand at 2,320-46 feet and made 300 bbls. after a shot of 120 quarts. Roth, Faurot and the Phillips Petroleum Co.'s No. 1, SW cor. SW, Section 10-23-10, had sand at 2,172-95 feet and made 25 bbls. after a shot of 40 quarts. Henderson & Holden have a dry hole at 2,267 feet in No. 1, SE cor. NW, Section 19-22-13. Mid-Continent Petroleum Corp.'s No. 8, CSL SW, Section 15-23-13, had sand at 1,771-83 feet and made 20 bbls. oil and 10 bbls. water after a shot of 20 quarts. No. 9, CNL SW, Section 15-23-13, had sand at 1,639-45 feet, and made 10 bbls. naturally. The Tidal Oil Co.'s No. 9, CWL SW SE, Section 15-23-13, had sand at 1,786-1,825 feet and made 270 bbls. naturally.

Roth & Faurot's No. 1, NW cor. NE, Section 13-25-8, is good for 60 bbls. after a shot of 40 quarts in sand at 2,404-13 feet. Edwards and others, No. 1, NW cor. NW, Section 23-24-10, is dry and abandoned at 2,750 feet. Arkansas Fuel Co.'s No. 15, CNL SE SW, Section 1-24-9, is making 75 bbls. after a shot of 100 quarts in sand at 2,280-2,334 feet. Skelly Oil Co. has a dry hole at 1,998 feet in No. 1, NW cor. SE NW, Section 27-24-13. Morgan and others' No. 1, SE cor. NE, Section 8-27-10, is dry and abandoned at 2,000 feet.

AUSTRALIA RAISES DUTY

WASHINGTON, D. C., July 19.—The Australian Government has made effective from July 9 a new schedule of general and preferential tariff rates on certain commodities, including imports of gasoline and other petroleum products. The general increase in each case is the same as the increase in the British preferential tariff which applies only to goods imported from the United Kingdom.

SOUTHWEST TEXAS

(Continued from Page 56)

and has a showing of oil. It will drill down to the chalk before completing the well and it is believed from the showings it will make a well. This well is in the northeast corner of the H. R. Turpe tract, and there is a 3-bbl. well in the southeast corner of the Bertha A. Turpe tract, about 2,000 feet north of it. Otherwise this Witherspoon well is more than a mile south of production. It is understood a major company will put down a deep test sooner or later on the Bertha A. Turpe tract. Helvetia Oil Co., this week is completing No. 8 Weimers and its No. 10 Sarah Smith homestead, each in the older part of the Somerset Field.

Bastrop County

Fred Adams' No. 1 Calloway, near Smithville, is drilling at 1,950 feet.

Bexar County

W. E. Rutledge's No. 1 Brooks, north of Carrin in Bexar County, has a showing of oil at 1,050 feet and is setting 6-inch casing to make a test. W. R. Hamilton, trustee, is completing No. 12 Hughes in western Somerset Field. I. L. Digman's No. 2 Gembler, in Bexar County, a little southeast of San Antonio, has abandoned the test at approximately 960 feet, which was the depth at which No. 1 was abandoned. He will make another test on the block later in the year. Jonray Oil Co. has spudded in No. 2 Sultenfuss, north of the Southton Oil Field. George E. Ginter has rigged up on No. 9 Cotton Mill test in the Southton Field, 300 feet south of No. 8. Utah Texas Oil Co. is standing at 2,946 feet in No. 1 Ivan Vick, in the southern part of the county, approximately 146 feet into the Edwards and is waiting for casing to set and test. It is claimed there were showings of oil in the top of the Edwards and again at 2,858 feet, and an effort may be made to complete a well at that depth. Marland Oil Co. abandoned its No. 1 Mihalski in eastern Bexar County after drilling considerable distance into the Glenrose, due to water which it was unable to mud off. Schimmel Oil Co. has bought 240 acres of leases in the Southton Field immediately east of production and is preparing to drill.

Brooks County

Ballard & Underwood are drilling at 2,210 feet in No. 1 Lasater, in the northeastern corner of Brooks County on a salt dome.

Caldwell County

J. M. Davis has taken over the completion of No. 1 Rideout of the Van Kueren Oil Corp., which is standing at a little below 2,100 feet and will set casing and make a test. The well is just outside of the rim of production in the Luling Field. San Oil Co. has abandoned No. 7 Gomillion in the Lytton Springs Field, which was drilled down to the Edwards after producing for some time from the Serpentine at below 1,300 feet. J. T. Storey has topped the chalk at 2,205 feet in No. 1 McConnell, south of Dale, a wildcat test, and is drilling at 2,534 feet. The well seems to have helped establish the existence of a fault but is on the downthrow side. Reiter-Foster Oil Corp., on a Texas lease, is drilling No. 1 Dinges, and is down about 400 feet. This test is toward the southeast of the other tests in that territory. Several tests have been drilled and those on the upthrow side have got a little oil. No. 1 Dinges will be of especial interest. It should get the formation high and if it does it stands a chance of getting production. J. B. Ashe's No. 1 Dick Jolly, northeast of the town of Lockhart, has been abandoned.

DeWitt County

George M. Ball has taken over the drilling of No. 2 for the Cuero Oil & Gas Co., on the block of acreage in DeWitt County where the Cuero Oil & Gas Co. drilled No. 1 Holzappel and got some good showings of oil but failed to make a well.

Edwards County

X. K. Stout's well, in Edwards County, is drilling at approximately 1,500 feet on the Peterson ranch.

Gonzales County

L. L. Jones spudded in on July 17 No. 1 Lamkin, 2 miles south of Waelder with a 112-foot derrick and prepared for a deep test. Business men of Gonzales have started a well near Slayton in Gonzales County and are down about 100 feet. Martin Oil & Development Co.'s No. 1 Preston, near Cheapside in Gonzales County, which has been shut down at 305 feet for three weeks, has resumed drilling.

Guadalupe County

J. M. Davis is starting to drill No. 2 Rosenbrock, in the Van Durran Survey in Guadalupe County, 2 miles south of New Berlin. The well is on the Payne & Bond block of leases where No. 1 was drilled to the Edwards lime and passed up more than 100 feet of formation carrying oil from 1,200-1,305 feet. No. 2 is drilling for the purpose of testing this out. J. M. Davis has the derrick up and the machinery on the ground for an Edwards lime test on the Pooley land, south of Staples, near where Magnolia drilled some wells and got showings of oil. John W. Hooser has abandoned his test on the Fulcher farm, north of the Luling Field in Guadalupe County. It stopped in the Edwards lime and was dry. A. P. Mueller's No. 1 D. F. Smith, in the W. H. Hunter Survey, is drilling at 2,250 feet and is in the chalk. Pat Armstrong is shut down at 1,480 feet in No. 1 Dale, located northwest of Kingsbury and a few miles west of production in the Luling Field. The Texas Company has abandoned No. 1 McGonigal in Guadalupe County, southeast of Kingsbury at 2,655 feet, in the Edwards and dry. B. F. Pooley has abandoned at 535 feet a test started 7 miles north of Kingsbury in Guadalupe County.

Live Oak County

Mid-Kansas Oil & Gas Co. has spudded in its Live Oak County well near Fant City on the J. H. Drummond farm in the John Conway Survey.

Medina County

Arnett Oil Co. is drilling at 346 feet in No. 4 Nixon in Medina County, a little south of the nearest production in the Ina Field. Medina Oil Co. has started No. 7 Taylor, northeast of No. 1, which came in some months ago making a large amount of oil from a depth of 356 feet. Al Buchanan's No. 1 Odom, a little to the northeast, is fishing at 346 feet. J. M. Davis has made a location west of Noonan and a little north of the Johnson Brothers well drilled last year that got a little showing of oil in the Edwards on the Tschirhart lease. He will drill to the Edwards. Kittle & Townley, who had a showing of oil at 960 feet in No. 1 Bendele in Survey 593, are waiting for tools to pull the liner and will deepen. They were unable to complete the test at 960 feet on account of water. Pat Armstrong has completed rigging up on No. 1 Long in the King ranch and has the derrick up and is moving in machinery for a test on the Lacey ranch, both of which are north and a little west of Hondo, the county seat of Medina. North & South Oil Co., starting a deep test south of Hondo, and a mile north of the Medina Oil Co.'s shallow well, encountered 20 feet of oil-bearing sand at 220 feet and will move in a light rig to test it out. Witherspoon Oil Co. is assembling derrick timbers and rig on the Adams farm, south of the Ina Oil Field in Medina County, and will drill a test a mile or so north of the four gas wells recently completed by Henderson & Holden. Henderson & Holden will drill again but have not fixed the location for No. 5. Tarver & Sprague, who shut down No. 1 Howard in Survey 91, over a mile east of the Henderson & Holden gas wells on the Adams tract, have moved the tools 3,500 feet north on the Redus farm and will drill again. Alamo Drilling & Leasing Co. last week spudded in No. 1 Kennedy in the western part of the county, a mile from the Uvalde County line and a half mile south of the Sabinal road. Ina Oil Co., at 1,944 feet, is 32 feet into the Edwards lime in No. 1 Hoffman in Survey 535. There is an odor of sulphur such as is present in the wells at Luling and No. 1 Hoffman will probably be an oil well or a water well within the next 50 feet. It got good showings of oil at shallow depths and seems to be on structure. Ina Oil Co.'s No. 1 Finger, several miles farther west, is drilling at about 600 feet in Survey 746. Cecil Switzer's No. 1 Zerr, northwest of Hondo, is drilling at approximately 2,000 feet and is in the Glenrose. Schermerhorn Oil Co. of Oklahoma, which got a small shallow well at around 800 feet in No. 1 Irrigation Co. land, Survey 31, southeast of Noonan, is drilling at 1,561 feet in No. 2 Schermerhorn, after passing up the shallow production and has started drilling on No. 3. J. R. McCaldin's No. 1 Thompson, west of Devine, is drilling at approximately 2,500 feet and is in the chalk. Gibson Oil Corp. is moving in big rigs to replace the small ones on the Carpenter test in Survey 808, southwest of the Ina Field, and the Aten farm test in Survey 847, south of D'Hanis. Golden West Oil Co.'s No. 6 Schmidt is drilling at 450 feet in the Ina Field, and the same company's wildcat test on the Joseph Courand farm, southwest of Castroville, has had an oil showing in a sand at 397-418 feet and is making a test.

McMullen County

George M. Ball is drilling at approximately 760 feet in No. 1 Kuykendall in western McMullen County. Eugene Sights has organized the Westmoreland Oil Co., which has taken over the block of acreage he had in northern McMullen County, a little north of Tilden, the county seat, out of the Franklin and Dillworth ranches. No. 1 Franklin, at 2,230 feet, has a showing of oil and is underreaming to set casing to make a test. No. 1 Dillworth is preparing to rig up.

Starr County

Ramsey-Maxey Oil Co. is changing to a big type rig in No. 1 Kelsey, in Starr County. Ramsey-Maxey bought a half interest in the well after it had been started with an old rig. The well is at 720 feet and as soon as the big rig is installed will deepen. Moody Oil Corp. is preparing to start a wildcat test in Starr County on a 20,000-acre block of leases got together by Bertrand de Graffe, and Heard and McCarley have the derrick timbers on the sidetrack in Rio Grande City for another test on the same block and three other tests are planned on it. The block is northeast of Rio Grande City and farther east than any of the tests started in the county.

Title difficulties have been pretty well straightened out in Starr County and a number of tests are likely to be announced soon. O. W. Killam's test on Survey 43, several miles northwest of Rio Grande City on the Guerra land, has been abandoned at 2,500 feet and Dauchey & Bryant, who drilled it, are moving the rig to Survey 125, a few miles farther west, and are preparing to resume drilling in No. 1 Kelsey, at 1,943 feet where it has been shut down. Portions Nos. 80 and 81, extending north from Rio Grande City have been partitioned among the various heirs and as a result, Simms Oil Co. is preparing to drill on the north end of the two portions where it has a block of 6,000 to 7,000 acres.

Val Verde County

Plateau Oil Co.'s No. 1 Harrison, in Val Verde County, at 2,275 feet, is waiting for casing to shut out water.

Wilson County

Humble Oil & Refining Co. is drilling on a water well preparatory to starting No. 1 Sellers in Wilson County, northeast of Floresville, in the Joseph Reynolds Survey. Gibson Oil Corp. has spudded in No. 1 Julius Espey, northwest of Floresville and is down a couple of hundred feet. Rosalie Oil Co., at 2,148 feet in No. 2 Dennings, 4 miles north of Stockdale, has a showing of oil presumably in the top of the Taylor Marl and, and if it cores enough of the formation with the same saturation will probably be able to make a well. The well is rank wildcat many miles from any production.

OKLAHOMA FIELDS

(Continued from Page 51)

nental Oil Co. has dug the cellar for No. 10 Pierce, SE cor. SW SE, Section 33-11-8. Moore & Daniels have the rig and tools in for No. 1 Stidham, SW cor. SW NW, Section 4-11-10. Champlin Refining Co. has a rig on the ground for No. 2 Ingram, C south half SW SW, Section 14-11-11. The rig is on the ground for No. 4 Jacob, C north half SE SE, Section 15-11-11. Eagle-Picher Lead Co. is drilling at 700 feet in No. 1-A Bird Creek NW cor. NE, Section 7-10-12. Riverland Oil Co. is drilling at 2,360 feet in No. 3 Barnett, SE cor. SW SW, Section 19-11-11.

Okmulgee County New Work

Producers & Refiners Corp.'s No. 5 Coleman, NE cor. SW SW, Section 29-15-11, is spudded. Devonian Oil Co. and others have a rig on the ground for No. 2 Piloche, CEL NE SE, Section 28-15-12. C. E. Campbell and others have spudded No. 3, SW cor. NW SW, Section 24-15-12. Kingwood Oil Co.'s No. 1-W, SW cor. NE SW, Section 11-14-12, is spudded. J. M. Kessler has a rig on the ground for No. 1 Boone, SW cor. SE SW, Section 19-14-12. John H. Rebold's No. 1, SW cor. SE SW, Section 25-14-12, is drilling at 450 feet. The Texas Company's No. 6 Bruner, CWL SW SE, Section 16-15-14, is rigging up. No. 1-A Garrett, NE cor. NW NE, Section 21-15-14, is rigging up. T. B. Slick is drilling at 750 feet in No. 2 Colbert, SE cor. NW SE, Section 14-14-14. Perkins and others have a machine on the ground for No. 1-W Sadler, SE cor. NE NE, Section 20-14-14. X-Ray Oil Co. has spudded No. 4, C SW SE, Section 32-14-14. Denver Producing & Refining Co. has spudded No. 8 Thomas, SE cor. SW NE, Section 32-13-11. Prairie Oil & Gas Co. has the rig up for No. 1, NE cor. SE NW, Section 10-12-11. E. J. Lambert has spudded and shut down No. 2, NW cor. SE NW, Section 21-13-14.

Okmulgee County Completions

Shaffer Oil Co.'s No. 9, SW cor. SE SE, Section 17-15-11, had sand at 2,950-3,024 feet and swabbed 20 bbls. It is not completed. Wigton & Long and the Mid-Continent Petroleum Corp.'s No. 1, SE cor. SW NE, Section 23-15-12, is dry and abandoned at 2,635 feet. C. E. Campbell and others' No. 2, CWL NW SW, Section 24-15-12, is good for 50 bbls. after a shot of 20 quarts in sand at 2,604-11 feet. Kirkland & Sons have a dry hole at 2,596 feet in No. 2, SW cor. SE, Section 8-15-13. Vincent and others' No. 1 Anderson, CSL SE NE, Section 3-15-14, an old well drilling deeper, had 3,000,000 feet of gas in sand at 1,525-40 feet and is drilling deeper. It is not completed. Misener and others' No. 1-M, CWL NE, Section 11-15-14, had sand at 1,367-74 feet with 5 bbls. after a shot of 50 quarts. The Texas Company's No. 4, SW cor. SE, Section 16-15-14, made 409 bbls. in sand at 2,334-44 feet. Elliott & Vensell's No. 9, SW cor. NE SW, Section 18-15-14, is dry and abandoned at 1,696 feet. Culp and others have a well making 125 bbls. after a shot of 6 quarts in sand at 1,549-58 feet in No. 2, CSL NE SE, Section 30-15-15. R. Kessler and others have a dry hole at 2,565 feet in No. 2, NW cor. SE SW, Section 32-15-15.

James A. Swindler and others' No. 8, NE cor. SW NE, Section 25-13-11, is estimated at 150 bbls. in sand at 2,440-77 feet. Tiger Mountain Oil Co.'s No. 1, SW cor. SW, Section 12-11-14, is dry at 3,694 feet.

Muskogee County Completions

Ozark Drilling Co.'s No. 1, SW cor. SW, Section 31-15-19, is dry at 1,347 feet. Cumberland Petroleum Co.'s No. 2, NE cor. SW SW, Section 5-14-19, is dry at 751 feet.

C. M. Bradley's No. 1 Crittenden, C north half NW SW, Section 5-14-19, is rigging up.

Tulsa County Completions

Elliott and others' No. 1 Thomas, CSL NE SE, Section 8-18-13, had sand at 998-1,110 feet and made 40 bbls. after a shot of 40 quarts. D. R. Owens' No. 1, NE cor. NW, Section 25-18-14, had sand at 1,310-31 feet and is estimated at 50 bbls. It will be shot. Petroleum Company and Mosier's No. 23, SW cor. NE, Section 4-16-13, is dry at 2,192 feet. J. A. Swindler's No. 1-A, NW cor. NW, Section 4-16-13, had the Wilcox sand at 2,066-2,115 feet with a show for 10 bbls.

XUM

FULTON HOUSE-SERVICE REGULATOR

Equipped with a highly efficient spring valve which automatically reduces high intake pressures to any desired degree. Its strong feature is the valve seat which our catalogue fully explains. Send for your copy today.

CHAPLIN-FULTON MFG. CO.
28-36 Penn Ave., Pittsburgh, Pa.

15

"CENTRAL" LINE PIPE

Of the same high grade we have maintained in "Central" Standard Pipe for over sixteen years.

DISTRIBUTORS

Taubman Supply Corporation, Tulsa, Oklahoma, and branches.
Dunigan Tool & Supply Company, Breckenridge, Texas, and branches.
Putnam Supply Company, Putnam, Texas, and branches.
Louisiana Iron & Supply Co., Shreveport, La., and branches

CENTRAL TUBE COMPANY

Pittsburgh, Pa.

Representatives in the Oil Fields

MID-CONTINENT
Allen, Sproull & Allen, Burk Burnett Bldg., Fort Worth, Tex.

CALIFORNIA
E. C. Saul, Monadnock Bldg., San Francisco, Calif.

The Gott Water
There is nothing which quenches thirst like a drink of cold water. Be sure you have it by making the Gott Water Can a part of your regular equipment. Galvanized, Guaranteed, made in all sizes.
You will find it at any Supply Store.
The H.P.Gott Mfg.Co.
Winfield, Kans.
OIL FIELD WATER CAN

J. W. McCulloch's No. 1-A, NW cor. NE NE, Section 30-16-13, is dry and abandoned at 2,364 feet. Turner & Turner's No. 4, NW cor. SW SW, Section 9-16-12, had sand at 1,440-50 feet with 2,000,000 feet of gas and is not completed.

Creek County New Work

Manford Development Co. has the rig and tools in for No. 1 Colbert, SE cor. SW SW, Section 3-19-8. J. B. Grieves has a rig up for No. 6 Lowe, CNL NW NE, Section 13-19-8. Gray Oil Co. is drilling at 540 feet in No. 1-A, NW cor. NE, Section 26-16-11. Savoy Oil Co. is drilling at 500 feet in No. 6, SW cor. NE SE, Section 22-17-8. Prairie Oil & Gas Co.'s No. 4, NW cor. SE SW, Section 3-17-9, is drilling at 450 feet. Mid-Continent Petroleum Corp. has spudded No. 1, CSL NW NW SW, Section 24-17-10. Aztec Oil Co. and others have a rig in for No. 4 White, NE cor. NW NE, Section 11-14-8. C. G. Tibbens has spudded No. 1, SE cor. NE NW, Section 30-15-9. Atlantic Oil Producing Co. has built the rig for No. 2 Bear, NE cor. NW, Section 16-14-10. No. 2, NW cor. SW NE, Section 16-14-10, is drilling at 450 feet. H. F. Wilcox Oil & Gas Co.'s No. 13, NW cor. NE NE, Section 20-14-10, is drilling at 500 feet.

Holmes and others have rigged up a machine for No. 1-A Doyle, C NE SW, Section 16-19-10. Westland Oil Co. has a rig up for No. 2 Walker, SW cor. NW, Section 22-17-9. Texas Pacific Coal & Oil Co. has a rig up for No. 2 Harjoche, SW cor. NE SW, Section 22-17-9. Chief Drilling Co. has rigged up No. 1 Fulsom, SE cor. SW SE, Section 16-17-10. C. G. Tibbens has rigged up No. 3 Hill, NW cor. SE, Section 36-15-8. J. W. Henry is rigging up No. 4 Davy, NE cor. NW SE, Section 2-14-8. C. G. Tibbens has the rig on the ground for No. 12 Johnson, CNL NW SE, Section 26-14-8. No. 1 Miller, SW cor. SE, Section 32-15-9, is also a rig.

Burnett and others have rigged up No. 10, Jack, SE cor. NW, Section 1-18-7. Holmes & Burton have the rig up for No. 4 Hamilton, SE cor. SW NE, Section 3-19-9. Roxana Petroleum Corp. has a rig up for No. 1 Black, NE cor. SE NW, Section 18-19-9. Commercial Drilling Co. is underreaming No. 5 Littleton, NW cor. SE, Section 19-19-11, at 2,080 feet. Posey Short and others have rigged up and shut down No. 1-A, NW cor. NE NW, Section 4-19-12. Continental Oil Co. is drilling at 650 feet in No. 8 Postoak, SE cor. NW, Section 29-19-12. Regal Oil & Gas Co. has spudded No. 27, CNL NW, Section 6-18-12. Sunray Oil Co. and Munn have spudded No. 7, SW cor. SE NW, Section 6-18-12. Shaffer Oil Co. is drilling at 1,250 feet in No. 6, NE cor. NE, Section 17-17-11.

Creek County Completions

O. F. Chapman's No. 1, SW cor. NW. Section 26-17-8, had sand at 3,190-3,205 feet and was shot with 10 quarts. It made 150 bbls. on the swab, and 250 bbls. after the shot. The Texas Company's No. 3, SE cor. NW, Section 3-17-9, had sand at 2,045-81 feet with 2,000,000 feet of gas and oil estimated at 200 bbls. The Prairie Oil & Gas Co.'s No. 7, SE cor. NW SW, Section 22-17-9, hand sand at 2,476-2,510 feet and made 25 bbls. after a shot of 25 quarts. R. O. Bailey and others have a dry hole at 2,915 feet in No. 1, SE cor. NE SE, Section 12-17-10. Pioneer Petroleum Co.'s No. 5, NW cor. SW NE, Section 24-17-10, had sand at 2,402-47 feet and made 850 bbls. naturally. Black Jack Oil Co.'s No. 1, NW cor. SW SE, Section 34-17-10, is dry and abandoned at 2,990 feet. Lewis Emery & Sons' No. 7, SE cor. NW NE, Section 21-16-9, had sand at 2,934-43 feet and made 60 bbls. after a shot of 5 quarts. H. F. Wilcox Oil & Gas Co.'s No. 5, NW cor. NE NW, Section 2-15-8, had sand at 3,644-59 feet and made 75 bbls. after a shot of 20 quarts. Simms Petroleum Co.'s No. 1, NE cor. NW SW, Section 4-14-8, is dry and abandoned at 3,401 feet. C. G. Tibbens' No. 26, NW cor. SE, Section 30-15-9, had sand at 3,541-3,603 feet and flowed and swabbed 260 bbls. daily. Jomack Oil Co.'s No. 2, C NW, Section 5-14-9, is dry and abandoned at 3,713 feet.

Pawnee County Completions

Schauble & Black's No. 1-A, NW cor. SW NE, Section 6-20-8, had sand at 2,505-2,614 feet and made 175 bbls. naturally. J. B. Grieves' No. 3 CSL SE NW, Section 31-21-8, had sand at 2,599-2,607 feet and made 10 bbls. naturally. Superior Oil Corp.'s No. 2, C SW NE, Section 9-20-7, had sand at 2,585-2,612 feet and made 5,000,000 feet of gas. Prairie Oil & Gas Co.'s No. 2, NE cor. NE, Section 23-20-7, is dry and abandoned at 2,862 feet. Tidal Oil Co.'s No. 9, NE cor. SE SW, Section 3-20-8, is dry at 3,205 feet. Producers & Refiners Corp.'s No. 6, SE cor. SW, Section 6-20-8, had sand at 2,204-30 feet and made 25 bbls. after a shot of 60 quarts. Selby Oil & Gas Co.'s No. 8, SE cor. NW SE, Section 23-20-8, had sand at 2,725-30 feet and is estimated at 35 bbls. C. L. McMahon's No. 7, CWL NW SW, Section 24-20-8, is dry at 2,814 feet. Industrial Oil & Gas Co.'s No. 1, SW cor. NE NE, Section 13-20-9, had sand at 2,399-2,400 feet with 8,000,000 feet of gas. Abicht Drilling Co.'s No. 1, NE cor. NW SE, Section 27-20-9, is dry and abandoned at 2,950 feet.

New Work

B. E. Kennedy has a machine in for No. 1 Black, NW cor. SW NW, Section 31-20-9. Minnehoma Oil Co. has built a rig for No. 9 Wrightsman, NW cor. NE NW, Section 24-21-7. No. 2, CNL SE NW, Section 17-20-9, is spudded. Prairie Oil & Gas Co. is drilling at 650 feet in No. 9, NE cor. NW, Section 10-20-8. Industrial Oil & Gas Co.'s No. 1 Black, NW cor. NW cor. SW NW, Section 18-20-10, is spudded.

Pontotoc County Completions

Hughes and others' No. 1, NE cor. SW NE, Section 28-4-7, had sand at 485-530 feet with 300,000 feet of gas.

Garvin County

Mid-Continent Petroleum Corp.'s No. 1, NE cor. SW, Section 32-3-3, is dry and abandoned at 2,002 feet.

Stephens County Completions

Bridwell & Heydrick's No. 1, NE cor. SW NE, Section 30-2-9w, had gravel wash at 2,016-78 feet and is estimated at 25 bbls. Smith Law and others' No. 2, C NE, Section 31-1-8w, is dry and abandoned at 2,168 feet.

Stephens County New Work

Westheimer & Daube's No. 1, SW cor. NW NW, Section 19-2-9w, is drilling at 450 feet. Hoffer Oil Co. has rigged up a rotary for No. 1 Finsley, NE cor. NW NW, Section 25-2-9w. Malernee and others have a rotary rig up for No. 1 School Land, SW cor. SE, Section 36-2-9w.

Kay County Completions

Harold Petroleum Co.'s No. 5, SW cor. SE SE, Section 4-27-1w, had sand at 3,423-35 feet and made 200 bbls. naturally. Blackwell Oil & Gas Co.'s No. 2, NE cor. SE, Section 5-28-1w, made 30 bbls. from sand at 3,473-76 feet. No. 1, NE cor. SW, Section 8-27-1w, had sand at 3,480-90 feet and made 240 bbls. naturally. Harris & Haun's No. 4, C NW SW, Section 9-27-1w, had sand at 3,448-62 feet with 36,000,000 feet of gas. Otstot Development Co. and others' No. 1, SW cor. NE, Section 10-27-1w, had sand at 1,470-90 feet with 2,000,000 feet of gas. Blackwell Oil & Gas Co.'s No. 2, NE cor. SE, Section 5-27-1w, had sand at 3,445-48 feet and made 800 bbls. the first day.

Kay County New Work

Harold Petroleum Co. has rigged up No. 4 Berkholter, SE cor. NE NW, Section 9-27-1w. Marland Oil Co. has spudded No. 1-A, NE cor. SW, Section 19-27-1w. Prairie Oil & Gas Co. has rigged up No. 1 Hargrave, SW cor. SE SW, Section 19-27-1w.

Lincoln County New Work

The Pure Oil Co. has the rig up for No. 1 Heineman, NE cor. SE, Section 21-14-5. The Texas Company's No. 1 Craig, SW cor. NW, Section 22-14-5, is rigging up.

Carter County Completions

The Amerada Petroleum Corp.'s No.

14, NE cor. SW, Section 28-5s-1, had sand at 1,250-63 feet and made 50 bbls. on the pump.

Garfield County Completions

Roxana Petroleum Corp.'s No. 4-L, SW cor. NW SW, Section 18-22-3w, had sand at 3,228-32 feet and made 562 bbls. naturally. Sinclair Oil & Gas Co.'s No. 38, SE cor. SW NW, Section 18-22-3w, had sand topped at 3,627 feet and is drilling at 3,635 feet and made 450 bbls. the first 12 hours. No. 41, SW cor. NW, Section 18-22-3w, had sand at 3,100 07 feet and made 90 bbls. naturally. No. 44, NW cor. SW NW, Section 18-22-3w, had sand at 2,550-54 feet and made 265 bbls. naturally.

Payne County Completions

The Prairie Oil & Gas Co.'s No. 1, SE cor. NW SE, Section 14-19-4, had sand at 3,727-30 feet and made 50 bbls. naturally. J. A. Hull's No. 2, SE cor. SE, Section 22-18-3, had sand at 4,300-30 feet with 5,000,000 feet of gas and is dry and abandoned at 4,340 feet. Deep Rock Oil Co.'s No. 1, SW cor. NW, Section 23-18-3, made 55 bbls. naturally from sand at 4,305-24 feet. Empire Gas & Fuel Co.'s No. 4, NE cor. NW NW, Section 26-18-3, made 4,000,000 feet of gas and 10 bbls. of oil from sand at 3,791-3,811 feet. M. T. C. Oil Co.'s No. 1, NE cor. SW NE, Section 26-18-3, made 350 bbls. from sand at 4,233-43 feet. No. 4, SW cor. NE NW, Section 26-18-3, is good for 45 bbls. from sand at 3,755-60 feet. Superior Oil Co.'s No. 1, SE cor. SW SE, Section 31-18-4, is making 16,000,000 feet of gas from sand at 2,564-2,657 feet. Shaffer Oil Co.'s No. 10 Laughlin, NE cor. NE, Section 2-18-5, an old well drilled deeper, had sand at 3,477-3,509 feet and made 1,886 bbls. the first 18 hours.

Comanche County Completions

Danciger and others' No. 1, NE cor. SE, Section 10-2-10w, had sand at 1,667-75 feet and is pumping 4 bbls. oil and 3 bbls. water.

Grady County New Work

Briscoe & Hall have moved in a rig for No. 1 Birt, NW cor. SW NW, Section 11-5-9w. The Carter Oil Co. has rigged up a rotary for No. 1 Harrison, SW cor. NE SE, Section 21-3-5w. No. 1, NE cor. SW SE, Section 21-3-5w, is drilling at 450 feet.

Grady County Completions

Stodgner and others have completed No. 3, C SW NW, Section 23-5-8w, for 30,000,000 feet of gas in sand at 2,078-2,345 feet. English-Jacobs' No. 4, NE cor. SE SE, Section 31-6-9w, is dry and abandoned at 2,380 feet. No. 1, SE cor. NW SE, Section 31-6-9w, had broken sand at 2,210-52 feet and flowed 26 bbls. It is being put on the pump. Briscoe & Hall's No. 1, NE cor. SE NE, Section 10-5-9w, had solid sand at 2,150-64 feet and broken sand at 2,164-2,400 feet. It flowed 50 bbls. Gorton Trust's No. 5, SE cor. NE SW, Section 12-5-9w, had broken sand at 1,864-2,393 feet and is flowing 50 bbls. The Carter Oil Co 's No. 1, NE cor. NW SW, Section 8-3-5w, had gas sand at 1,805-14 feet with 6,000,000 feet of gas and 10 bbls. of oil. Magnolia Petroleum Co.'s No. 1, NE cor. NW, Section 34-3-5w, had sand at 1,450-59 feet and flowed 180 bbls. the first 13 hours. Prairie Oil & Gas Co.'s No. 3, C north half NE NE, Section 3-4-8w, had broken sand at 2,049-78 feet with 12,000,000 feet of gas. The Carter Oil Co.'s No. 1, C NW SE, Section 14-4-8w, had broken sand at 2,469-98 feet with 1,000,000 feet of gas.

RUSSIAN COMMISSION

HOUSTON, Tex., July 17.—Five members of the Russian commission of the Governmental Petroleum Trust Grozneft, of Grozny, Russia, have arrived in New York to make a tour of the Mid-Continent, coastal and Pacific Coast oil fields. They will remain in this country five months. They are: P. Gantschin, vice president; P. Rodminsky, general manager; P. Ackerman, manager of new installment; M. Wischetrawsky, chief engineer, and E. K. Wallen, interpreter.

It is the intention of the Russian Government to explore and develop prospective territory in south Russia, Caucasus, Turkestan and Siberia, according to Dr. Kurt von Muecke, of Houston, vice president and general manager of the North American Exploration Co., which makes use of the seismograph and torsional balance in exploration work.

BRITISH ENGINEER VISITING U. S. FIELDS

HOUSTON, Tex., July 17.—R. J. Ward, British petroleum engineer, is in Houston as a guest of a number of geologists and officials of oil companies. He is studying productive methods of the oil industry in this locality.

Mr. Ward is making a study of the oil industry throughout the world, and came to America from Egypt. He was for some time in the British oil region, about 250 miles south of Suez. Prior to his trip to Egypt, he was in Russia and India. The efficiency of the entire oil industry of America has greatly impressed Mr. Ward.

"I notice that in America the supply men follow up the field engineers," he said. "Here one can order a car load of supplies and get it the next day. In the other countries I have visited one must wait from two weeks to six months before he receives his supplies."

British drilling in Egypt has been quite successful. Oil men in Egypt have had considerable trouble with emulsion, but a Dutch invention for dehydration has proved very successful in eliminating this trouble, Mr. Ward said.

Drilling for oil in Egypt is not an easy task. The men must haul their supplies and fresh water sometimes 200 miles. The nearest railroad is over 250 miles away. Near the British oil fields, he said, are the old wells from which the Romans in early days drew their water when quarrying marble in that vicinity.

Mr. Ward said the Russians are taking up American methods of producing oil, and there had been a decided improvement there in the past few years. Only in the past two years have Russians been pumping oil. Prior to that they used only the bailing method.

Mr. Ward has visited a number of oil fields of the North and is enroute to California where he will visit the fields.

BORDER RESEARCH CORP. ORGANIZED AT HOUSTON

HOUSTON, Tex., July 17.—The Border Research Corp., with an authorized capital of 2,500,000 shares of no par value, has been chartered under Maryland laws. The operating offices will be in Houston in charge of W. C. Hardcastle. The general offices will be in New York City.

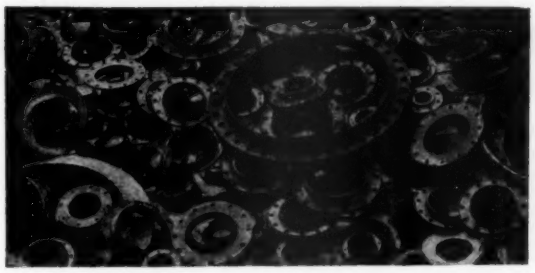
B. F. Bush of St. Louis has been elected president; W. C. Hardcastle of Houston, vice president; Sidney P. Allen of Chicago, secretary-treasurer; Leroy Bryan of St. Louis, assistant secretary-treasurer. The directors are B. F. Bush, Sidney P. Allen, Henry H. Timken, Canton, Ohio; Henry Oliver of Pittsburgh; E. F. Simms, Lee Hager and W. C. Hardcastle, all of Houston.

The Border Research Corp. owns in fee approximately 1,457,000 acres in Mexico and, roundly, 700,000 acres in the Gulf Coast region of Louisiana. It also holds under lease mineral and oil rights on approximately 1,250,000 additional acres in the Louisiana coastal region.

The purpose of the company is to develop its holdings in mining and drilling for oil, gas, sulphur and salt. It will also handle reclamation projects.

The Houston men identified with the corporation are all well known. Mr. Simms, previous to his retirement three years ago, was probably the most active independent operator in the Gulf Coast country. Mr. Hardcastle has been connected with Mr. Simms for many years. Lee Hager is a pioneer coastal geologist. The company is drilling a test in La Fourche Parish, Louisiana.

TAYLOR *Forged Steel* FLANGES



PIPE flanges, tank flanges, boiler flanges, seamless boiler nozzles, welding necks—all of unbreakable forged steel, supplied from stock faced, threaded and drilled, ready for installation. The safest and most reliable connections. A complete catalog on request.

AMERICAN SPIRAL PIPE WORKS

for 20 years the largest manufacturer of forged steel flanges

MAIN OFFICE AND WORKS:
Box 485, Chicago, Illinois
New York Office: 50 Church Street

OGJ7-22Gray

Spray Paint Your Entire Equipment

Let 1 Man Do the Work of 5

Save 80% labor costs over the pail and brush method. Do a quicker, better painting job with Binks Spraying Equipment. All surfaces look alike to the quick and easy operating Binks Spray Gun. Storage Tanks, Gas Holders, Tank Cars, Buildings, Piping, etc., can now be preserved at an extremely low maintenance cost.

Get BINKS Spraying Equipment ---It Pays!

Before you make one move toward investing in spraying equipment it will pay you to consult Binks spray engineers. Let these specialists give you the advantage of their long experience in spraying Lead and Oil Paints, Graphites, Red Leads and other corrosive resisting materials. There is no obligation. Write for details today.

BINKS Spray Equipment Company
Dept. G., 3110 Carroll Ave. Chicago

The World's Largest Manufacturers of Industrial Spraying Equipment
Branches in All Principal Cities

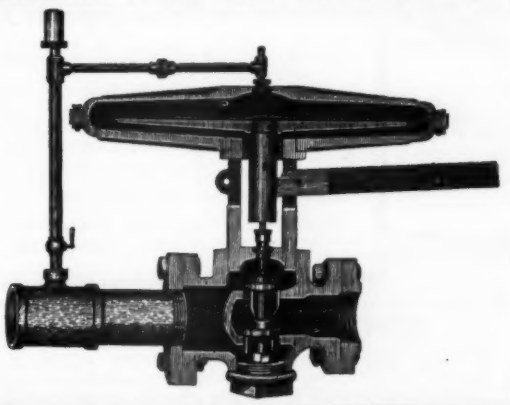
1886 1926

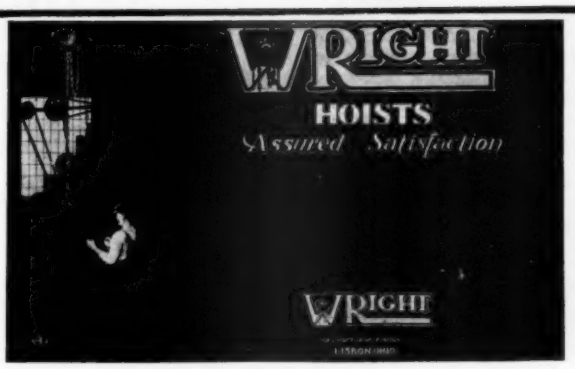
GILFILLAN—REGULATORS

For accurate control of natural and manufactured GAS

Bulletin on request

GILFILLAN MACHINE WORKS
Ebenezer, N. Y.





APPRAISALS — SURVEYS — DESIGNS — CONSTRUCTION

NATIONAL PETROLEUM ENGINEERING CORPORATION

OFFICERS AND DIRECTORS

W.N.THAYER, President
D.D.FINLEY, Vice-President
HARRY A.CAMPBELL, Secty.
HERBERT D MASON
PETER Q. NYCE
F. LEE STEWART

OFFICES

TULSA, OKLA.
ATLAS LIFE BLDG.
WASHINGTON, D.C.
ALBEE BLDG.
LOS ANGELES, CAL.
SECURITY BLDG.

ENGINEERS — NPGE — GEOLOGISTS

JONES
PERFECT FORGED
END RODS
have no equal
anywhere
S. M. JONES CO.
TOLEDO — OHIO —
TULSA OFFICE
602 Wright Bldg.

A big fleet of *modern* cars

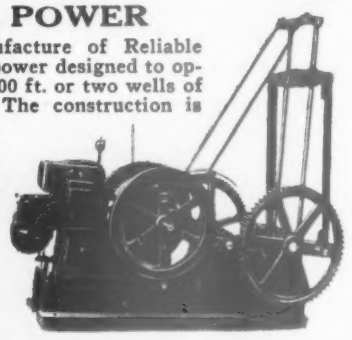
4 large, conveniently located shops to keep them in condition;
18 years' specialized experience;
Special services to shippers, described on request. Address
North American Car Corporation
327 S. LaSalle St., Chicago, Ill.

TANK CARS FOR LEASE

Domestic and Export Terminals
CHICAGO
TULSA
NEW ORLEANS

SINGLE WELL POWER

We are announcing the manufacture of Reliable Junior, a combined engine and power designed to operate a single well of around 2000 ft. or two wells of approximately 1000 ft. depth. The construction is such that the power does not have to be moved in order to pull the rods as the jack-head is detached from the polish rod and laid back and the rods can be pulled without any interference on the part of the power. For pumping isolated wells and testing out wells before the completion of the drilling of a lease the Reliable Junior is the most economical and efficient power on the market.



We also manufacture and sell the Reliable Combined Engine and Power, of which over 1200 are in successful operation, and The Spence Combined Engine and Roller-Bearing Single Eccentric Power. *Write for catalogue.*

THE SPENCE MACHINE COMPANY
Parkersburg, W. Va.

CALIFORNIA METHOD OF CEMENTING CASING THROUGH PERFORATIONS

By Harold J. Vance*

The general use of cement as a medium for shutting off water has led to a number of standard methods of cementing. Cementing through perforations has not been considered an approved method of placing the cement behind the casing, although with proper equipment and under certain conditions it has some advantages over other methods more commonly used. The operator is not only interested in shutting off water but also in preventing the cement from coming in contact with and sealing the oil bearing formation at a point where it cannot be removed.

Each field presents new development and production problems, and the fields of the Los Angeles Basin, California, were no exception. The Long Beach Field was characterized by great thicknesses of productive formation with no intermediate water. Wells drilled on top of the structure could produce clean oil from as much as 2,500 feet of formation which consisted of alternating strata of sand and shale. The unconsolidated nature of the producing sands made it necessary to set screen or perforated casing opposite the formation to be produced. Before it was known that such great thicknesses of producing formations were present, the usual practice was to set a perforated liner extending through the oil measures and up into the water string. Finally, with increased penetration of the productive formations, a solid oil string with perforated casing opposite the producing formation was found to be more satisfactory.

Very little coring was attempted in the early life of the field, and even during 1924 only wells which were known to be edge wells were cored. When certain wells drilled on top of the structure (and producing from 1,000 feet or more of formation) began to produce some water soon after completion, there was considerable doubt as to its source. By placing cement between the oil and water strings in a number of wells the water was eliminated. The continual rotation of the drill pipe had worn holes in the water string, through which water entered the hole. The water, passing down through the inside of the water string, had access to the oil measures and was produced with the oil. Thus the source of water proved to be "top water" and not "intermediate water" as had first been presumed. All degrees of injury to the water string were possible; from a small leak to almost complete destruction. The amount of water produced depended, to a certain extent, on the degree of the point of injury to the water string.

It finally became general practice to cement the oil string through perforations placed above the regular perforations in the casing, or even through the upper part of the original perforations in the casing, but below the shoe of the water string. This cementing was usually done by the tubing method. The tubing was run into a depth above the perforations, the well closed in at the top, and circulation established between the oil and water string. A swedge nipple was usually placed in the bottom of the tubing to stop the cementing plugs. The two-plug casing method can also be used provided an obstruction to stop the plugs has been welded in the oil string above the perforations. Circulation is established through the perforations and the cementing conducted in the usual manner.

There were a number of objections to this method of cementing. With the hole full of mud fluid or water, the only path the cement can take, after circulation has been established, is down through the oil string, then through the perforations and up between the oil and water strings. This path of the cement is maintained during the period of circulation, except when the cement is pumped faster than the size of the perforations will take care of, when the cement will pass down through the perforated casing until it has access to a sufficient number of holes to equal

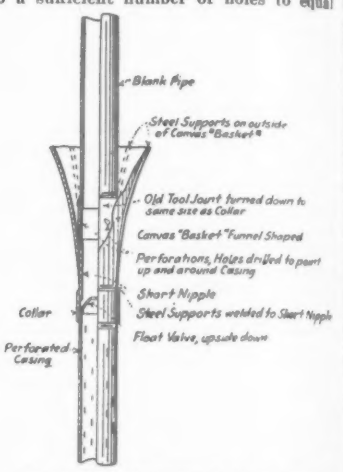

Blank Pipe
Steel Supports on outside of Canvas "Basket"
Old Tool Joint turned down to same size as Collar
Canvas "Basket" Funnel Shaped
Perforations, Holes drilled to point up and around Casing
Short Nipple
Steel Supports welded to Short Nipple
Collar
Float Valve, upside down
Perforated Casing

FIG. 1—METHOD OF CEMENTING OIL STRING THROUGH PERFORATIONS

the amount and rate at which the cement is being pumped. When all the cement has been pumped in and the plugs are together, circulation stops. At this point, there is mixed cement both inside and outside of the oil string in direct contact with the mud fluid below. The mixed cement is almost twice as heavy as the mud fluid in the hole, and this difference in weight allows the cement to settle gradually through the mud fluid both inside and outside of the perforated casing. Mud fluid mixed with cement will harden, and in this manner, the perforations will be sealed as well as the oil sand for some distance below the point of cementing. Continued swabbing of the well may open the perforations, but it is hardly possible that production from the oil sand will ever be satisfactory.

Two Prime Purposes Served in New Method

With the idea of eliminating the sealing of perforations and "cementing off" of the oil sand, the equipment shown in Figure 1 was evolved. The essential parts of this equipment are: (a) the float valve placed upside down, (b) the holes or perforations through which the cement is pumped, and (c) the canvas retaining "basket." The float valve, placed upside down, is used to prevent the cement from settling down inside the casing below the special perforations and to stop the cementing plugs. A second float valve in normal position may be placed one or more joints above the first float valve. This valve allows the oil string to be partly floated in, and also assures clean cement at the perforations. If the second float valve is not used a long spacer should be placed between the plugs. A collar or old tool joint turned down and threaded, with holes drilled to point up and around the casing, forces the cement to spiral around the casing. The number and size of holes drilled depends on the size of the casing, capacity of the pumps, and the amount of cement to be used. The usual number of holes is four, and the sizes range from ½ to ¾ inch in diameter. These holes may be fitted with small flap valves opening outward to prevent the cement from coming back into the casing once it is outside. These valves are not necessary if a second float valve is used. Holes drilled to point up and around the casing are not so essential for this type of cementing as for cementing the water string, which will be discussed later, as the oil string is probably lying against the water string or side of the hole, and even with the holes drilled to cause the cement to spiral around the casing it would be almost impossible for it to do so. After the cement has been placed, a strain can be placed

*Formerly geologist and petroleum engineer, the United Oil Co., Los Angeles, Cal.
In Mining and Metallurgy for July, Republished With Permission.

on the casing in order to lift it away from the side so that the cement can go entirely around the casing.

The retaining "basket" is made of heavy canvas, modeled in the shape of an inverted truncated cone. The diameter of the upper base should be equal or slightly larger than the diameter of the hole, and the diameter of the lower base

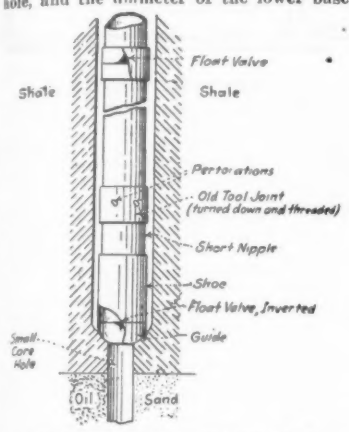


FIG. 2—METHOD OF CEMENTING WATER STRING

equal to the outside diameter of the casing used. It is supported and reinforced on the outside by steel staves welded to the short nipple below the special cementing perforations. The canvas "basket" is riveted to the steel staves. The steel staves are turned inward at the top to allow the "basket" to re-enter the water string if it should become necessary to pull the oil string before cementing.

The equipment, as illustrated, was first assembled and tested by pumping water through the special cementing perforations in order to observe the action of the fluid passing through the perforations. The water was given a whirling motion and spiraled entirely around the casing within 4 feet above the holes. The action may be regulated by the size of the holes and the angles drilled to force a complete spiral motion of the cement around the casing at almost any point over 2 feet above the perforations.

This method of cementing the oil string through perforations soon became general practice with the United Oil Co., and a number of other California companies are now using it.

It is believed that if this method of cementing through perforations had been used earlier in the life of the field considerable more oil would have been recovered.

As a later development, a system of using similar equipment was evolved for cementing the water string through perforations.

In cementing by the usual method, (i.e., pumping cement through the casing and out through the shoe, float plug or valve and up between the casing and the walls of the hole) it is seldom possible to lower the casing to the original bottom of the hole after the cement has been forced outside of the casing. This condition leaves the cement supporting the casing and forming the impervious bond between the casing and the walls of the hole.

Cementing in Sand Not Always Positive

In former days, it was always customary for the driller to look for an impervious stratum of some kind in which to set the casing for a formation shutoff. With the widespread use of cement in effecting a water shutoff, this basic principle was almost forgotten, and it was assumed that cement would shut off water no matter what kind of formation the casing was set in. The writer knows of a number of cases in which casing was cemented in sand, both with positive and negative water shut off results.

It is always good practice, in the cementing of a long string of casing to move the casing as little as possible for fear of parting it. By the usual method of cementing, it is practically impossible to prevent some movement of the casing during a cementing job.

It was with the idea of setting the shoe of the water string in an impervious stratum and without moving it to force the cement around the casing that the following method of cementing was evolved.

Improved Method for Setting the Water String

In this case, an old tool joint turned down to the diameter of the collars and threaded, was again used. Holes were also drilled to point up and around the casing and were covered with flap valves which opened outward. A casing shoe, slightly larger than the diameter of the casing collars, was procured. This was fitted at the bottom with a guide and float valve upside down and at the top with a short nipple. The perforated tool joint was placed above this short nipple and the casing screwed directly into the perforated tool joint (see Figure 2).

This equipment was first used on the United Oil Co.'s Dominguez No. 1 in the Dominguez Field, Los Angeles County, Calif., in Augusa, 1924. A 12½-inch hole was being drilled, and at 4,180 feet, a 7½-inch core barrel was run in and a core recovered showing gray sand. The core hole was reamed out and a 12½-inch hole drilled to 4,202 feet. Another 7½-inch core barrel was run in and a 2-foot core recovered showing saturated oil sand with a well-cemented portion near the top of the core. Two additional 7½-inch cores, showing saturated oil sand, were taken and the hole when measured was found to be 4,212 feet deep, with a 12½-inch hole down to 4,202 feet and a 7½-inch hole from 4,202 to 4,212 feet. The driller's log showed the formation between 4,182 and 4,202 feet to be shale. The hole was reamed out to a depth slightly below 4,202 feet, and the equipment, just described, was run in on the bottom of 8¼-inch casing with a float valve in normal position between the first and second joints so that the casing could be floated in. The casing was then run to bottom and pulled up just enough to place a little stretch in the casing. Circulation was easily established through the perforations and the well cemented by the regular Perkin's method, the plugs stopping on the second float valve placed between the first and second joints from the bottom. A perfect water shut off was secured.

Several Advantages for These Methods

This method was later used by the United Oil Co. and by other companies when conditions warranted. The best results are obtained by this system if the casing is set on a shoulder of shale, which may be formed by reaming out a small core hole to the formation depth most suited for landing the casing. The larger shoe allows the bottom of the casing to be centered in the hole and with some stretch in the casing it should not lay against the side of the hole for some distance above the bottom. The whirling motion set up by the mud and cement passing through the special perforations, will force the cement entirely around the casing for at least two joints above the bottom.

The chief advantages of cementing the oil string through perforations by the method just described are as follows:

1. No cement comes in contact with the oil sand.
2. The perforations in the oil string are not plugged with cement.
3. The cement will not channel up through the mud fluid behind the casing.
4. Under favorable conditions, cement will be forced entirely around the casing.

The chief advantages of cementing the water string by the second method described are as follows:

1. If the casing is landed in an impervvious stratum, a water shut off may be secured with the cement used as an added precaution.
2. The casing is never moved after being set on a shoulder or on bottom.
3. The cement is forced entirely around the casing at the point most needed.
4. The cement will not channel through the mud fluid behind the casing to be cemented.

The material contained in this paper is the result of experience in the Los Angeles Basin, California, during 1923, 1924 and 1925. The ideas put forth and the results obtained are those of Charles McGee, Edward Sherwood and the author, all with the United Oil Co. at that time.

GENERAL ASPHALT CO.'S VENEZUELAN INTERESTS

General Asphalt Co. is reflecting expansion in its royalty receipts from Venezuelan oil properties says the Wall Street Journal. Under this royalty arrangement, which has been in effect since 1923, General Asphalt changed from a partner of Royal Dutch in the properties to a landlord receiving one-eighth of the oil produced without any operating expenses.

Royal Dutch in the last few years has been centralizing much of its producing activities, bringing Venezuela forward to replace, in part at least, the big decline in its Mexican production. Last year Royal Dutch produced 12,326,000 bbls. in Venezuela, nearly 50 per cent larger than its 1924 yield and four times larger than its 1923 production there. Asphalt's royalty receipts started at 479,000 bbls. of oil in 1923, increased to 572,693 in 1924 and last year were 777,314 bbls. Not all Royal Dutch production comes under the royalty but at the present rate of production, Asphalt is getting much larger royalty payments than the average of 2,000 bbls. daily in 1925.

Including its own production of crude oil in Trinidad last year, 442,158 bbls., Asphalt had total oil yield of 1,219,472 bbls. in 1925, or about 3,500 bbls. a day. It owns itself a concession in eastern Venezuela which has been partly proven and should soon be a producer, having chartered a tanker to move oil to Philadelphia.

General Asphalt, when the royalty arrangement was made, received back the investment it made during the period it was a partner. Its royalty contract with Royal Dutch, covers the 312,500-acre Valladares concession and the 4,000,000-acre Vigas concession. The Vigas concession is one of the largest in Venezuela. It has no pipeline yet but development work has resulted in ten good-sized wells and proven about 15 square miles. Wells are capped when completed, pending completion of full testing operations before pipeline is laid.

COMMERCIAL PLANT FOR BERGIN PROCESS

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., July 19.—The extraction of liquid fuel from coal by the "Bergin process," will be promoted by the erection of a commercial plant in the Ruhr. According to advices to the Department of Commerce from Trade Commissioner William T. Daugherty of Berlin, Dr. A. Spilker, head of the "Gesellschaft fuer Teerverwertung, of Duisburg-Meiderich, stated at the annual meeting of the Association of German Chemists at Kiel, that a large commercial plant would soon be erected in the Ruhr district to operate the Bergin process of coal liquefaction with hydrogen under pressure ranging from 100 to 200 atmospheres. Though the problem had been technically solved, local economic conditions prevented its operation for a yield of oil alone. Only in recent months, according to Doctor Spilker, has the "Gesellschaft fuer Teerverwertung" been able to improve the process to a point of perfection to permit competitive operation. With the probable operation of the Bergin process in the Ruhr, it is more or less definitely established now that I. G. Farbenindustrie A. G. is beginning to operate successfully a process involving both distillation and hydrogenation of lignite for a yield of oils.

OIL PRODUCTION IN JAPAN

Crude oil production in Japan gradually declined from 1919 until it dropped to 1,503,000 koku in 1924 (1 koku=47.66 gallons), according to the Japan Financial and Economic Monthly for April, 1926. Production increased somewhat in 1925, however, amounting to 1,531,000 koku. The years 1915-17 were the most active for the output of crude oil. The more important oil fields in Japan lie in the two prefectures of Niigata and Akita, which claim nearly 90 per cent of the total production for 1915 and 1916.

WANTED!

MAN TO TAKE CHARGE OF EXPERIMENTAL PLANT

A high grade man with at least five years' experience in petroleum refining to take charge of small experimental and demonstration plant on special process of refining. Experience in distilling, treating and filtering various crudes a decided advantage.

All correspondence treated confidentially.

Box No. B-399
OIL AND GAS JOURNAL

M.REF. CO. 101 TOOL CHECK

OIL DRUM STENCILS CHECKS STAMPS

Quality, material and workmanship, plus prompt service, is your assurance of satisfaction.

Catalog free upon request.

Partrige-Scotford Stamp & Stencil Co.
915 Baltimore Ave.
KANSAS CITY, MO.

MYERS WATER SYSTEMS FOR HOMES·FARMS·PUBLIC AND PRIVATE INSTITUTIONS

Myers Self-Oiling Bulldozer Power Pumps for oil and gas field service, for mills, mines and factories—Myers Self-Oiling Water Systems for Homes, Farms, Public and Private Institutions—tell us your requirements. We are the world's headquarters for Pumps for every purpose. Ask your supply house, your jobber, your dealer or write us direct. Catalog mailed promptly on request.

THE F.E.MYERS & BRO.CO. Ashland,Ohio
ASHLAND PUMP AND HAY TOOL WORKS

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

CLASSIFIED WANTS

CREATE AND BUILD BUSINESS

MAIL your advertisement now. It will be published next week. Cash with order.

LEASES—PRODUCTION

LEON DISTRICT—Near big new deep sand, Reynolds oil strike; 360-acre lease, 1½ miles from this 500-bbl. well; three-quarters of a mile, other production; or will sell this splendid 480-acre farm. Complete information, write or see W. E. Mathewson, 511 N. Hillside, Wichita, Kans. M.6064.

OIL and gas lease on 10,000 acres for a drilling contract. D. L. Cummins, Haskell, Tex.

FOR LEASE—160 acres in Lyon County and 80 acres in Coffee County, Kansas. Well locations nearby. Box 403, Post, Tex.

FOR SALE or lease 2,600 acres, Garza County, Texas. Good geology. Few miles from production. Box 403, Post. Tex.

FOR SALE CHEAP—Oil and gas leases on the following: New Commercial on SW ¼ of NW ¼, Section 2-16-8, Dept., 4 years to go, on N ½ and SW SW of Section 17, and NE of SE of Section 18-17-9. Commercial, 3 years to go, on W ½ of SE ¼ of Section 33-17-9. All in Creek County, and near big production. Make offer. Box B-400, The Oil and Gas Journal, Tulsa, Okla.

ATTENTION, LEASE BUYERS

I am about to spud a well 40 miles west of Miami, with money up in bank to pay for 4,000 feet. Can deliver 560, possibly 640, acres seven-eighths commercial lease scattered, 1½ to 2 miles of this well. Expect require four months drill. Will furnish accurate information as well goes down. What do you offer? Neil Scroggins, P. O. Box 2788, Miami, Fla.

PANHANDLE OIL LEASES

We have for sale five-year commercial leases in Hutchinson, Moore, Hartley, Dallas, Sherman, Gray and Hemphill Counties ranging in price from $2.50 to $100 per acre. Write or wire, Brunsvold & McCracken, ground floor, Amarillo Bldg., Amarillo, Tex.

SOUTHEASTERN NEW MEXICO

10,000 acres state leases in ten townships of southern Lea County. Also drilling blocks in Chaves and Eddy Counties. Address W. A. Nicholas, Roswell, N. Mex.

2,000 ACRES prospective oil land, get in ahead of the pending developments. D. P. Trim, Realtor, 743 E. St., San Diego, Calif.

AMARILLO PANHANDLE OIL FIELD

Underwriter Brainard Ranch oil and gas leases, 25,000 acres in Hutchinson County. Hutchinson County is the major producing area. New 5-year leases from 20 acres to 160 acres. Bought right can sell at reasonable price per acre. Write for map and prices. I have handled, as underwriter, over 60,000 acres in the field on which over 80 wells are now drilling or producing. Ed R. Mayer, Amarillo Hotel Bldg., P. O. Box 1186, Amarillo, Tex.

YOU have your organization and can give good service. Does the Billion Dollar Petroleum Industry know it? Have you made it easy for oil men to order from you? If not, the surest and best way to promote the merits of your company is to use The Oil and Gas Journal—the oldest and best petroleum publication in the world.

FOR SALE—Leases and settled production in Warren, Allen and Barren Counties, also drilling propositions in shallow territory. Warren and Allen Counties oil is now posted at $2.10 to $2.40 per bbl. and Barren County at $2.85. W. P. Harley, Bowling Green, Ky.

HAVE SEVERAL pieces of flush and settled production for sale in Oklahoma and Wichita Falls districts. Prices reasonable and terms can be arranged if necessary. P. O. Box 1144, Dallas, Tex.

FOR SALE or lease—300 acres tested on all sides, Bartlesville sand. John McQuiston, Route 7, Independence, Kans.

LEASES—PRODUCTION

SOUTHEAST NEW MEXICO

Can furnish practically proven leases in Artesia Field, Eddy County. Also other tracts in Eddy, Chaves and Lea Counties. Particulars on request.

H. T. ORCUTT

1114 Colcord Bldg., Oklahoma City, Okla.

TEN-YEAR oil leases. No rentals. Crockett County, Texas. Send for true map. Paul Konz, Box 291, Fort Worth, Tex.

HAVE BUYERS for flush or settled production in Oklahoma and North Texas. Vern R. Hartman, P. O. Box 442, Dallas, Tex.

OHIO COUNTY, KY. Drilling propositions to reliable operators who will drill for acreage. Depth of wells from 800 to 1,100 feet. This county produces oil from a true sand or Penna. formation. Full data on request. R. E. Cope, Bowling Green, Ky.

HARTMAN & SARGENT — Leases, royalties, production, bought and sold, Dept. A. Geological and property management, Dept. B. You'll like our service. Office, Lawrenceville, Ill.

THE SMALL SUM that it costs to insert an advertisement in the Classified Section of The Oil and Gas Journal enables you to place your desires in the minds of men who are always interested in a good proposition.

WRITE for my state of Texas oil map free. Oil leases exclusively. Reference Mercantile Agencies.

C. W. WEBSTER
W. T. Waggoner Bldg.
Fort Worth, Tex.

ROYALTIES—PRODUCTION

TEXAS PANHANDLE

Royalties in large or small units to suit any size buyer in fastest growing and most rapid developing oil field in middle west. Write for list of offerings. B. O. Taylor, 306 Blackburn Bldg., Amarillo, Tex.

ROYALTIES wanted sell clients. Have deal right broker, 839 West End Ave., New York, N. Y. Gregg Snyder.

WANTED—Producing royalties Oklahoma and Kansas. Give full details. P. O. Box 502, Independence, Kans.

WANTED producing royalty, Oklahoma, Arkansas, Texas, Kansas. Give all details. L. R. Kershaw, Muskogee, Oklahoma.

WANT producing royalties in Arkansas and Louisiana. Give all details. James H. Dugan, Randolph Hotel, El Dorado, Ark.

FOR SALE—EQUIPMENT

FOR SALE—One 12" Saunders Machine complete with two die heads and 20 sets of dies. Special price, $250, f.o.b., Milwaukee, Wis. C. M. Lewis, 303 Harrison, Oak Park, Ill.

We buy and sell
Casing, Line Pipe and Supplies.
Let us figure with you.
LEE MORRISON SUPPLY CO.
Bartlesville, Oklahoma.

FOR SALE

60 8,000-gallon tank cars, all equipped with steam coils, safety valves, double riveted heads and belly plate, center anchored, steel underframed, thoroughly overhauled, repainted and A-1 condition; now in service out of Tulsa. A bargain, $750.00 each. M. E. Gaskill, 801 Kennedy Bldg., Tulsa. Okla.

CASING (Slightly Used)
5,000 ft. 5 3/16", 20-lb. per foot
1,150 ft. 6¼", 26-lb. per ft. (900 ft. new.)
1,575 ft. 6⅝", 24-lb. per ft.
2,650 ft. 8¼", 28-lb. and 32-lb. per ft.
2,600 ft. 10", 40-lb. and 45-lb. per ft.
1,100 ft. 12½", 50-lb. per ft.
1,000 ft. 15½", 70-lb. per ft.
Line Pipe (Slightly Used)
5,500 ft. 4", 11-lb. per ft.
23,700 ft. 6", 19.45-lb. per ft.
25,000 ft. 8", 29.35-lb. per ft.
10,000 ft 4" Standard black.
Drilling Rig
1 No. 25 Star, portable, complete with firebox boiler.
Write, Wire, Phone,
THE DENVER METAL AND MACHINERY CO.,
Denver, Colorado.

FOR SALE

Second-hand pressure stills suitable for storage purposes. Length 30 feet, diameter 10 feet; weight about 27,000 pounds; capacity 18,600 gallons. Steel riveted and welded. Manhole-top, 20 inches; end 24 inches, bolted manhole cover. Price $400 each, f.o.b. cars, Neodesha, Kans.
THE STANDARD OIL CO. (Kansas)
Phone 236 Neodesha, Kans.

FOR SALE—Two No. 19 and 1 No. 25 Armstrong and 1 No. 38 Star drilling machines with complete sets of tools. Rigs are in good running condition. W. P. Harley, Bowling Green, Ky.

20 8,000-gallon tank cars, all equipped with steam coils, safety valves, double rivited heads and belly plate; located in Texas and Tulsa. Price $350.00 each. M. E. Gaskill, 801 Kennedy Bldg., Tulsa. Okla.

CRAGO CUT GEARS

Worthy of your confidence. General machine work. 1416 Walnut, Kansas City, Mo. Phone Harrison 7660.

USED LINE PIPE FOR SALE
50,000 feet 3 -inch
75,000 feet 4 -inch
50,000 feet 6 -inch
Two miles 60-pound first-quality relaying rails.
For immediate shipment from our Texas yards.
KEYSTONE PIPE & SUPPLY CO.
315 W. T. Waggoner Bldg.
Fort Worth. Texas.

PIPE FOR SALE

1-in. to 12in. Also complete drilling rigs. We are also in the market for pipe of any size or quantity.
LOUISIANA IRON & SUPPLY CO.
2001 Texas Ave., Shreveport, La.

LETTERHEADS—PRINTING

CONSUMERS' LEDGERS

We are prepared to furnish from stock standard forms of gas meter Consumers Ledgers. Sample forms and quotations on request. First class material and workmanship.
DERRICK PUBLISHING CO.
Oil City, Pa.

OIL FIELD LEGAL BLANKS

Leases, assignments, releases, township books, well records, etc. Request on your letterhead gets free catalog. Old Press, 215 East Third St., Tulsa, Okla.

POSITION WANTED

OPEN for position doing geological work, making oil and gas surveys, superintendent drilling inspecting properties. Best of reference. Years of experience. Box B-404, The Oil and Gas Journal, Tulsa, Okla.

BUSINESS EXECUTIVE—Engineer-geologist seeks correspondence leading to connection with established oil interests. Well qualified to handle purchasing, engineering and operating departments. Address M. G. R., Box 403, Post, Tex.

MECHANICAL POSITION — Technical education, journeyman machinist. Six years technical and practical experience in design, manufacture, construction and installation of oil country equipment and specialties. Previous experience was in contract shop, general mechanical maintenance, and manufacturing. Reliable references. Box B-402, The Oil and Gas Journal. Tulsa, Okla.

CIVIL ENGINEER

Technical graduate with 20 years' exceptionally broad experience including oil field operations. Banking and professional references. Fluent Spanish. Open for foreign engagement only. Box B-370, The Oil and Gas Journal, Tulsa, Okla.

IF YOU are in need of a natural gas man to take charge of office, plant or both, address Box B-382, The Oil and Gas Journal, Tulsa, Okla.

MONEY RAISING

DEPENDABLE FINANCING SERVICE

Results sure, swift, economical. Employ the One Great Plan—the plan that gets money. Avoid abortive "mail order" and "phony" broker schemes. Describe proposition. Hansel Financing Specialists, 212-GE Earlham St., Pittsburgh, Pa.

ADVERTISING RATES

	1 Time	2 Times	3 Times	1 Mo.
3 lines	1.05	1.80	2.55	3.30
4 lines	1.40	2.40	3.40	4.40
5 lines	1.75	3.00	4.25	5.50
6 lines	2.10	3.60	5.10	6.60
7 lines	2.45	4.20	5.95	7.70
8 lines	2.80	4.80	6.80	8.80
9 lines	3.15	5.40	7.65	9.90
10 lines	3.50	6.00	8.50	11.00

(Six words usually make a line.)

Compute white space at the above rates.
Mail your advertisement to

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

BUSINESS CAPITAL

An experienced dependable broker with following is prepared to give personal attention to the financing of a worthwhile proposition. Address B. W., 810 Broad St., Newark, N. J.

DO YOU NEED MONEY for organizing or financing oil or mining deals? Write 117 E. 10th, Oklahoma City, Okla.

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

CLASSIFIED WANTS

CREATE AND BUILD BUSINESS

MAIL your advertisement now. It will be published next week. Cash with order.

HELP WANTED

POSITION available for high-class salesman able to sell from 1,000 to 1,500 bbls. cold test lubricating oils per day is first consideration. Salary and additional compensation on profit sharing basis to right party. All replies considered confidential. Box B 405, The Oil and Gas Journal, Tulsa, Okla.

SALESMAN WANTED

To handle gasoline, naphtha and motor spirit to the trade in Ohio, Indiana, Michigan and Western Pennsylvania. Only high-grade man with good record will be considered. We want a salesman and not an order taker. Box B-406, The Oil and Gas Journal, Tulsa, Okla.

WANTED—Oil country blacksmith with experience making cable tool drilling bits. Box B-391, The Oil and Gas Journal, Tulsa, Okla.

DRAFTSMEN—Capable of handling design as well as detail work. Should be familiar with refinery and general oil field layout and construction. Experience and sample of work to accompany application. Chief Engineer, Empire Companies, Bartlesville, Okla.

WANTED

WANTED—$100,000 to purchase and develop 2,500 acres irrigated land, and drill for oil; no risk; big profit; money returned in two years. Box H, Hope, N. Mex.

WANTED—100 to 500 bbls. of crude oil per day for experimental refinery. Reply stating price delivered in tank car or barge at Camden, N. J. Also grade and average quality of crude. Box B-401, The Oil and Gas Journal, Tulsa, Okla.

WANTED—Party to drill at least 8 wells on a 50-acre lease; nearly surrounded by wells; top of sand about 870 feet. Will furnish drive pipe and string of 8¼" drilling casing. Near pipeline; one-fourth royalty. If interested, write J. R. Cline, Iola, Kans.

CAPITAL NEEDED

Capital needed for developing several hundred acres producing acreage in structure 30 miles from Casper and 2 miles from pipeline to refinery. Bureau of Mines report shows 200 bbls. paraffin base oil producer at 2,300 feet. No bonus; reasonable royalty. A big money maker for small group. Wire or write K. S. Albert, Casper, Wyo.

IT'S WORTH TRYING

During the year thousands of men use the Classified Wants Section to good advantage.

They use it to buy or sell leases, royalties, production, equipment or service of all kinds.

You can do the same thing.

Mail your advertisement now and it will be placed in next week's issue where more than 25,000 readers will have an opportunity to bid on your offering.

BROKERS to underwrite meritorious stock issue on producing oil properties. Justify payments, large dividends. By appraisal, assets $239,000, competent engineers. Sales used for expansion purposes. Box B-354, The Oil and Gas Journal, Tulsa, Okla.

WANT TO BUY—Fifteen to 25 bbls. oil production in shallow field with some undeveloped acreage. Write box 562, Parkersburg, W. Va.

INCORPORATIONS

DELAWARE incorporators. Charters fees small, forms. Charles G. Guyer, 901 Orange St., Wilmington, Del.

Take Advantage of It!

The 1926 Semi-Annual Number of The Oil and Gas Journal, containing a wealth of useful information, statistics, analyses, graphs, pictures, tables, photographs, drawings, maps, covering activities during the first half of this year will be published July 29, 1926.

Thousands of Producers, Refiners, Natural Gasoline Manufacturers, Marketers, Exporters and Executives will use it for reference throughout the year.

Advertisements in the Semi-Annual Number will be read, time and time again. Take advantage of it.

Buy or sell, oil leases, royalties, production, used equipment, or service through the Classified Wants Section. It doesn't cost much!

Mail your ad now so that it will be in the Semi-Annual Number, where it will be working for you the rest of this year.

The OIL and GAS JOURNAL
PRODUCING REFINING MARKETING
TULSA, OKLA.

PATENT ATTORNEYS

REGISTERED PATENT ATTORNEYS
United States and Canada
Before disclosing your invention to anyone send for blank form,
Evidence of Conception
Bulletin "How to Establish Your Rights"
and complete information free.
LANCASTER & ALLWINE
240 Ouray Bldg., Washington, D. C.

THE SCHEME of life is so arranged that some men have capital and need equipment, while others have salable articles and need cash. For these men, The Oil and Gas Journal Classified Section provides an excellent opportunity to broadcast their wants.

PATENT-SENSE — Valuable book (free) for inventors seeking largest deserved profits. References include prominent oil men. Write Lacey & Lacey, 718 F. St., Washington, D. C. Established 1869.

FOR SALE—MAPS

SOUTHEASTERN NEW MEXICO MAPS
Geological, Ownership and Sectional
Complete and Authentic
Write for folder.
M. H. HUNTER CO.
Roswell, New Mexico

BUSINESS OPPORTUNITY

FOR SALE

160-acre farm, on Kansas City-Tulsa paved highway, close to Tulsa. Good productive soil. New dairy barn with latest improved equipment and with water system in barn. Good well, gasoline pump and new water tower. All buildings and fences well maintained and in good first class condition, and all equipment is new. Plenty of shade around building. Nice 4-room house. Would also sell 7 head registered Jersey cows, 5 of them recently imported, or would sell farm separately. Terms to responsible party. Address 1532 South Madison Avenue, or telephone 2,4229, Tulsa, Okla.

TWO FEE ranches. M. F. Beaumont. Hartley, Tex.

DRILLING CONTRACT

Offer drilling contract on Dome 25 miles U. P. R. R. in Wyoming. Depth 1,500 feet; 8,800 acres. No bonus; 12½ per cent royalty. Map furnished on request. Also offer royalty interest in 3 structures in Wyoming being drilled by Standard subsidiaries.
K. S. ALBERT, CASPER, WYOMING

WABASH DRILLING CO., solicits your work. We maintain 10 strings of cable tools and will furnish estimates on work in any cable tool country. Bring on your wildcats. Wabash Drilling Co., office, Lawrenceville, Ill.

A GOOD rotary rig in good shape; fully equipped; good engine; splendid 40-h.p. boiler; 1,500 feet first class drill stem. Will sell at actual bargain, or consider interest in wildcat development. Address, Mr. Beissel, Sour Lake, Tex.

BUSINESS OPPORTUNITY

WILDCATTERS ATTENTION
Will exchange 10,000 acres oil and gas leases on first class geological structure in Polk County, Wisconsin, for test well; natural gas seepage; shallow drilling. George Laskowske, Turtle Lake, Wis.

NEW GAS SECTION in northwestern Pennsylvania; shallow drilling; gas at 35 cents per M.; large area proven out; pipeline extensions made wells connected. Recommended the drilling of present wells. Have completed a geological report. Address V. A. Billstone, Jamestown, N. Y.

HAVE 400-acre lease in Oklahoma. Well 3 miles from production, want to drill deeper; need capital and will give interest. Full particulars on request. Box B-403, The Oil and Gas Journal, Tulsa, Okla.

CAN deliver an attractive block of acreage for immediate drilling on which there is a well 1,500 feet deep. Box 494, Gainesville, Tex.

FOR SALE—2,500 acres Columbiana County, Berea sand acreage. Write or wire for details. George P. Smith, Salineville, Ohio.

RANCH for sale, crossed by Mexican railway; easy terms. Apply Gutierrez Bank, Box 146, Orizaba, Mexico.

SHALLOW drilling proposition and close up leases in Brown County. Frank Poorman, 3215½ Ross Ave., Dallas, Tex.

FOR SALE — Section land, DeBaca County, New Mexico. Red, tight, level land. Good well. Prospective oil value. Not leased. $7.50 acre. E. A. Gaston, Okemah, Okla.

ADVERTISING RATES

	1 Time	2 Times	3 Times	1 Mo.
3 lines	1.05	1.80	2.55	3.30
4 lines	1.40	2.40	3.40	4.40
5 lines	1.75	3.00	4.25	5.50
6 lines	2.10	3.60	5.10	6.60
7 lines	2.45	4.20	5.95	7.70
8 lines	2.80	4.80	6.80	8.80
9 lines	3.15	5.40	7.65	9.90
10 lines	3.50	6.00	8.50	11.00

(Six words usually make a line.)

Compute white space at the above rates

Mail your advertisement to

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

FOR SALE DOGS

FOR SALE—Registered smooth-coated fox terrier puppies; best blood lines; registration papers and extra pedigree furnished. Stud dogs for service. W. A. Haines, 914 Crosby St., San Antonio, Tex.

MOTION PHOTOGRAPHY

SHOW your wells and machinery in motion pictures, others are doing it. The equivalent of each 1,000-foot standard film now costs you only $24 finished. Charley High, P. O. Box 1071. Studio 2819 E. Third, Phone 3 9598, Tulsa, Okla.

XUM

Chicago Demand Good, Market Strong

Kerosene Has "Gone Wild Again." Growing Sentiment for Distillate Contracts on Quantities if Not on Price

By J. B. Waldo

CHICAGO, July 17.—Seasonable weather has brought about a great increase in the gasoline consumption and it is most probable that the actual increase in the sales to motorists is greater than the replacements made by the jobbers. Many of the latter are still drawing on supplies in their storage or are holding for orders previously placed for July shipment, waiting to see if the demand is likely to be maintained. Of course this is wholly a weather condition but we are just beginning to have real summer weather and it should last. It may continue with little interruption until the close of September, in which case the gasoline season will end as good as it started and the unfavorable June will be forgotten.

The touring season is late. Oil men who were in the North Woods during the week say they met few cars and that local distributors were complaining that the tourist traffic had been unusually light so far. But locally the stations report business is very good and that driving has been active.

The demand has been active with refiners and good with most marketers, although the latter have not done as well as refiners who have quoted the trade direct. In many cases the quotations made by refiners have been the same to the trade and for resale which practically cuts out the marketer as few of the latter have had any quantity of gasoline bought for July at the lower prices which prevailed during June. June was not an encouraging month, and the close found the trade hopeful but at the same time apprehensive of what might happen if the demand did not improve. But the business done over the Fourth of July and since has settled the question as to demand. Supplies are generally stated to be adequate. Occasionally a refiner with either his own distribution or a large quantity under contract begins to hold back from taking large business but generally gasoline is freely offered and the price situation does not indicate any scarcity at least for the present. Reports from the eastern part of the territory state that supplies are to be had from Atlantic Coast refiners and in one case Navy gasoline was shipped into Ohio from Baltimore at a price which equalled 10 cents Group 3. The weather in the East has been very hot and the consumption of gasoline must have been large and this source of supply for the eastern part of what is commonly considered at least debatable Mid-Continent territory may be used up by the local coast demand. Still the capacity of the Atlantic Coast refineries is very great and they are some of them at least beginning to receive considerable shipments of crude from South America, the first cargo of 90,000 bbls. of Colombian crude having been received at Bayonne this week.

Market Strong

Generally the market for Navy gasoline is quoted as strong at 11¼ cents, with at least two refiners asking 11½ cents. Both of these are practically sold up and could not accept any considerable quantity of business at present. Both have, however, heavy withdrawals on contracts or for their own distribution to care for. Others are thinking of advancing their prices if the demand continues so that they can place a real volume of unfilled orders back of their quotations. There is very little gasoline that could have been bought at less than 11¼ cents to the trade and much of this is from sources that suggest the quality may be off or delivery uncertain. The demand for the 56-58 450 gravity and for the 450 Navy is also active, although there is a growing tendency among the jobbers to stick to the Navy grade the year 'round. For one thing motorists are more discriminating and for another there is too much of the new high compression or cracked gasoline with its 400 end point offered to motorists. The morists' standard of gasoline has in a way been raised by the advent of this gasoline.

Sales of the new gasoline are stated to be very large by its distributors and several have complained they could not get full supplies. They did get what their contract called for, but no additional cars could be had. To fill in some of these have bought 60-62 400 in the open market, while others have taken in Navy gasoline. The higher gravities have simply sold in routine fashion and prices are not noticeably stronger, although some refiners have asked higher prices. Some demand for export is reported, but not in great volume.

Kerosene in Demand

Kerosene has, to quote a common expression in the trade, "gone wild again." A large export business seems to have taken a number of refiners out of the market except for small amounts to their regular customers. But the buying from the country mentioned previously has continued and increased. It is the demand caused by the small grain harvest. The first rush orders noted came from the southern parts of the territory, Kentucky, Kansas and Missouri being represented. The demand has advanced until jobbers in all parts of the territory have been wiring, phoning and writing for kerosene. They were apparently waiting for lower prices and were taken by surprise. Most of them are of the class of smaller concerns. Several of the larger ones bought liberally two or three weeks ago and at prices much lower than prevail today. At that time 5½ cents was a good price compared with the present market for 41-43 water white kerosene held at 6¼ to 6½ cents, according to sellers with a little, a very little, available among marketers at 6⅛ cents. It would not be an easy matter, if possible, to buy today at 6 cents from any refiner, and marketers who seem to have been asleep have been trying for the past three days to buy at that price with very little success. The talk is again of 8 and 8½-cent kerosene, but this does not seem likely if the price is to be brought about by a continuance of the present demand, for it should not be expected to continue beyond the end of the current month. By that time the small grain harvest will be over, the threshing about done and the next period of activity will be the fall plowing season, which last year was cut short by the freezing of the ground early in October. This was very unusual, but dealers here expect to see a decreased demand for kerosene during August and September, but an active demand after October if the season is at all favorable.

Distillate Prices

The strength shown in the kerosene division should be reflected in distillates for they are according to a high authority "sister products." So far there has been no demand for immediate shipments to reflect any change, up or down. There have been some offerings of distillate and it would seem that at the present quotations, any jobbers with storage would be taking little risk in taking in what he can afford to carry. But the jobbers are too hopeful as to the sufficiency of the supply and too uncertain as to values to take any such action. It is not advised, for each must do as he thinks best, but if the demand for the past two weeks was sufficient to send kerosene skyrocketing, what would a good steady spell of zero weather do to the price of distillates? That is a question and the industry as a whole seems inclined to play safe by contracting for quantities but not at a price. The inclination is to do this in other products than distillate or furnace oils. One argument is that there is no reason why the distributor should make any other plan for his distillate customers than that for the gasoline and kerosene customers. This is a good argument on the face of it. Kerosene and gasoline are sold at the tankwagon or station prices and why not distillate? For one thing it is a reversal of the usual custom, which with regard to furnace oil has been to contract for the season just as with fuel oils. Another reason is that furnace oil is sold in larger dumps to the consumer than gasoline or kerosene. Thousands of home owners who never bought more than a gallon of kerosene or ten of gasoline have and want to continue to buy furnace oil in hundreds of gallon deliveries and they want to know what it is going to cost them over the season. It is a serious matter to change established trade practices. Although the oil heater is a comparatively new thing, still there is a custom as regards the method of securing the season's supply. The distributor who must shoulder the burden of making the change naturally wants his business to run along as it has been doing and so does the oil burner maker and the consumer. The refiners probably would be willing to accommodate but they want a price which the oil burner man says will put him out of business. One refiner stated during the week, that in his opinion there would be plenty of distillate and gas oil available but that the prices during the coming season would run 3 cents higher than last year. Perhaps watching the kerosene market for the next two weeks may give some aid to a solution of the problem which confronts the distributor of furnace oils, today. They are growing more and more impatient to get out and make their season's contracts and in some cases have done so and are taking the chance. May their dreams be untroubled by visions of higher costs than they have guessed.

Gas Oil Firm

Gas oil is in demand and firm at a slight advance. The demand is mixed but totals a large volume. Some believe that both industrial users and distributors of furnace oils have bought for storage to some extent, the former more commonly than the latter. There are industrial users today that stand ready to fill their tanks as soon as their oil man tells them the bottom has been reached. They want him to take the risk and none want to do this. Right now it seems to many the low point of the season is here if not passed while others are waiting to see what will take place when the fall demand for gasoline is satisfied and refiners begin to shut down their cracking plants. Some refiners who have previously been counted upon as reliable sources of supply for gas oil are today out of the market as they are storing their gas oil for cracking or selling it on contracts to refiners that have cracking plants. Some are running their gas oil down as low as 28-30 for cracking stock. The gas companies are in the market from time to time for considerable quantities and all in all there is a good demand and limited supplies offered Little overhead gas oil is available and the product is sufficiently scarce here to command a premium of from an eighth to a quarter of a cent depending on the needs of the buyer and the quantity desired. The market is firm at 4⅛ to 4¼ cents for cracked gas oil with some dark oil selling at 4 cents.

Fuel Oil Advanced

Fuel oil has been advanced by several refiners 2½ cents a barrel and generally

WEATHER SLACKENS EASTERN DEMAND BUT PRICES ARE HOLDING FIRMLY

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 543, 30 Church St., New York

NEW YORK, July 17.—Some slackening in demand because of unfavorable weather, an indication that eastern refineries and distributing stations are heavily stocked with gasoline and a slight weakening in the spot tank car market, are the outstanding features of the week's market in the East.

On the whole prices have held more firmly than was expected a week ago, and this is probably attributable to a somewhat more conservative refining policy on the part of the large companies. However, these companies went into the year and into the consuming season with large stocks and the preseason demand has been so satisfactory that it cannot be said that there is an overstocked condition now. The smaller companies are still understood to be holding smaller stocks of gasoline.

Early in the year the reluctance shown in the advance of gasoline prices—these advances being apparently considerably overdue when they arrived—was due to the fact that the bulk of the increase in gasoline storage was accounted for at the large refineries and that these companies did not feel disposed to advance prices until more certainty as to consumption increases could be established, and the movement of gasoline away from plants be more clearly defined as to volume.

Whether gasoline prices will be maintained rests entirely now on the volume of the demand. The stock situation is not bad and the refining volume, together with the movement of gasolines from California and the Gulf Coast into the eastern markets, should not bear down the market unless something unlooked for occurs.

Demand for gasoline in bulk has been without any feature, U. S. Motor gasoline in tank cars delivered to the trade ranging from 14 to 14¼ cents a gallon.

Kerosene Easier

Continued easiness in kerosene is noted. No further downward change in price has been recorded, but the tendency continues for shading of spot bulk prices at refineries.

Gas and Fuel Oil

Gas oil is steady but quiet. Grade C bunker oil is reported in better demand and the price is firm at $1.75 a barrel f.o.b. New York harbor refinery. Diesel oil is in good demand.

Lubricants and Waxes

No notable change is shown in the market for lubricants and waxes.

the market is firm. Sellers are receiving many inquiries for contracts ranging from 90 days to the full 12 months. Dealers are slow to bid on the six months and yearly contracts and when they do bid the prices seem out of line to the buyers. One large steel concern is in the market for a full year but announces that its maximum prices is $1.10 per barrel at which price it is certain it will be unable to contract for the gravity of oil wanted. Another has asked for price over the year and is being quoted with much hesitation around $1.30. The suggestions has been made to buyers that the only kind of a contract at all equitable is one based on crude and most believe the present crude prices are top for this season so the inference is made that the later prices might be lower if the posted prices of Mid-Continent crude are changed as they say these prices will not advance and should decline.

No large contracts are reported closed during the week here with the exception of one rail contract for Smackover which went at $1.15 or 5 cents over the posted price. The buyers are still ordering for immediate needs and hoping to buy more cheaply a little later. The policy of buying for immediate wants has brought them to the verge of the season of greater consumption of fuel oil with practically no accumulation of low-priced oil in their storage. Some dealers believe stocks in consumers tanks are much less than a year ago. At that time oil was available at $1 per barrel and quite a number had considerable stocks and others contracts on the market.

There has been undoubtedly considerable short selling with the expectation on the part of the sellers that they would be able to cover later at a lower price. In several instances these orders are being filled at a loss to the seller of at least 5 cents a barrel. In one instance a refiner bid $1.15 on an order from a well known manufacturer. He lost the order, as the buyer told him, to a marketer at $1.12½ but the refiner is filling that order, at least he is shipping to the manufacturer on account of the marketer and the cost to the marketer is $1.17½. There are other and parallel instances.

The Smackover situation is still unchanged with the prevailing price at $1.20 per barrel, or 10 cents over the posted price.

Lubs Firm

The chief activity in lubricants is in motor oils. These are in demand and firm in price. Neutrals are scarce and wanted. Refiners have been in the market for quantities of bright stocks and generally the demand is very active. The consumption of motor oils and greases is heavy and stocks nowhere excessive Some companies have stated that their demand is so largely for rush shipments that jobbers' stocks, especially the small jobbers, must be low. The industrial demand is still fair to good. Talking with a lubricating compounder he said the number of companies seeking the business of buyers was so large that the competition was excessive. In the territory surrounding Omaha, for example, there were 32 companies seeking this business and all had men traveling the territory, at least making occasional trips.

Tankwagon Situation

There have been no general changes in the tankwagon schedule nor at important points over the territory of the Standard Oil Co. of Indiana. There is some price cutting and it was reported that in the vicinity of Minneapolis there had been local reduction but the normal price was maintained by the Standard at that point. Observers studying the situation state that while here is perhaps less open reduction of prices, there is a very great deal of price cutting through the giving of special discounts and that in the end the result is the same. The Standard Oil Co., while making no official statement, has let it be known very clearly there is no intention of discontinuing its Q. D. A. system of discounts for quantities and the insertion of a cancellation clause in its contracts now coming up for renewal is merely a protective measure to add to the integrity of the contracts, not with the idea of any general cancellation. Local or individual conditions may make it desirable to terminate some contracts. Oil men assert, that is many of the fair-minded, that the making of the Q. D. A. contracts has brought no new conditions into the price situation as it was very customary to give the large buyers a discount of their purchases and that the practice would continue if the Q. D. A. were eliminated. It is very largely a matter than time will settle. It has also been stated that no change in the amount of the discounts or of the quantities to which the discounts apply is contemplated.

Fuel Marketers Meet

Some dozen of the local distributors of fuel oils held a meeting this week at which an effort was made to arrive at some understanding regarding the course to be taken regarding the present situation. It was more to learn what conditions actually were as found by the various companies than to take any action. As regards furnace oil it was the general idea that the action of the Standard Oil Co. would prevail and that no contracts would be made with consumers that a price more definite than the market or tankwagon price at date of delivery. The ideas of members as to the market likely to prevail during the coming season were wide apart. Ideas as to the range on gas oil were from 8¼ to 9¾ cents on 28-30 fuel oil from 7½ to 8½ cents; on 24-26 fuel oil from 7 to 8 cents; for a 18-22 fuel oil, 6½ to 7½ cents. Not one of those present was willing to admit that he had been able to cover his needs for the coming season. It would appear right now there will be little real contracting done until later but as soon as one starts, there will be a general scramble. Each is watching the situation very keenly for the first step by competitors.

The local gasoline consumption is large although many of the older dealers state their business is just seasonable, not extra good, and some frankly admit their sales are holding their own only as compared with last year, a condition which they attribute to more stations and to some extent to the active sales effort made by The Texas Company to market its new gasoline. Some price cutting is as usual to be found largely among the garages.

ROYAL DUTCH PLANS ARGENTINE PIPELINE

Reliable estimates of the production of crude petroleum in Argentina during the year 1925 just reported by United States Consul General H. H. Morgan, Buenos Aires, give the output of government wells as 3,773,585 bbls. and that of private wells as 2,044,025 bbls., making a total production of 5,817,610 bbls. This output represents a substantial increase over that for 1924, when the government production was officially reported as 2,989,995 bbls. and the private as 1,257,900.

The government is apparently succeeding in its effort to increase the national output of petroleum. Near the close of 1925 the production of the State wells at Comodoro Rivadavia was increased to approximately 12,600 bbls. per day. The new wells in Neuquen brought in about 2,150 bbls. daily during the last months of the year. A decided impetus was given to national production in December, 1925, by the inauguration of the new government-owned refining plant at La Plata, in the Province of Buenos Aires.

Private companies also reported increased production and successful drillings were said to have been made near the reservations at Comodoro Rivadavia. The Royal Dutch Co., after finding oil just south of Comodoro Rivadavia, has petitioned the Argentine government for a concession to construct a pipeline to the Atlantic coast. Several other companies are conducting preliminary surveys in the vicinity of Mendoza.

UNITED STATES DISTRICT COURT INTERPRETS ARKANSAS LEASE

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., July 19.—The Phillips Petroleum Co. took assignments of certain oil and gas leases providing for a cash payment, a further sum "to be paid out of one-third to seven-eighths of the first oil produced and sold from said premises." This provision led to litigation and in the case of E. R. Allen and others against the Phillips Petroleum Co., the United States District Court for the western district of Arkansas holds this agreement to mean that such further sum should be paid only from proceeds on and sold from the leaseholds. The Circuit Court of Appeals, eighth circuit, affirmed the decision of the District Court.

The opinion in this case was delivered by Circuit Judge Stone, who held:

Appellants were the owners of undivided interests in two certain oil and gas leases. With their co-leasers, they proceeded to develop the property until there were seven producing wells thereon. At that point, all of the lessees contracted to sell their interests to appellee and, in performance of such contract, executed an assignment of the leases. The appellee paid the cash consideration required by the contract and assignment and proceeded with development. After about two years of development and payment, from oil runs, to the appellants, appellee abandoned the leases, withdrew therefrom and so notified appellants. At the time of the abandonment, a considerable part of the deferred portion of the purchase price ($177,500) was unpaid.

Appellants filed this bill for accounting and reformation claiming two items: their proportion of the unpaid purchase price and their proportion of the value of fuel oil used by appellee in the operation of the leases.

The controlling issues before the court were: (1) whether the contract and assignment obligated appellee to pay the purchase price balance if it abandoned the leases, and (2) whether such instruments gave appellee the right to use, without cost to it, such fuel oil as was reasonably necessary in the operation on the leaseholds. Both of these issues depend upon the contract obligations of the parties and really present but one question which is whether the above balance was to be paid only from the oil produced by and sold from the operation of the leaseholds by appellant.

The consideration for the assignment of the leases was as follows:

"For and in consideration of the sum of $71,000, cash in hand paid, the receipt whereof is hereby acknowledged, and the further consideration of $177,500, to be paid out of one-third or seven-eighths of the first oil produced and sold from said premises, said consideration to be paid in the manner as directed by memorandum attached to sale contract and agreement, which is made a part by reference thereto."

The material part of the "memorandum attached to sale contract and agreement" above referred to, is as follows:

"It is agreed that payment to be made out of oil run from or sold from the above described lease, shall be paid to each of the above-named parties in proportion to their interests as indicated."

These quotations seem to be clear and unambiguous to the effect that the only obligation of appellee as to the deferred portion of the purchase price was to pay for oil "produced and sold" from the leases. Appellants contend that the contract, which resulted in the assignment, was such that, if the court should deem the assignment to mean payment only from oil produced and sold, the assignment should be reformed to agree therewith. There is no such allegation or showing of mutual mistake or fraud as to authorize such reformation. However, if basis for reformation were shown in mistake or fraud, an examination of the contract would reveal that the assignment was in true compliance therewith. The essential parts of the contract are:

"Party of the second part agrees to pay said sum of $71,000 cash; and $177,500 out of one-third or seven-eighths of the first oil produced from said leased premises upon the party of the first part executing a proper and sufficient deed of assignment, assigning said interests as hereinbefore described, and upon the acceptance and approval of the title by the attorney for the party of the second part. And it is agreed that party of the second part or its assigns shall pay to the parties of the first part, their heirs or assigns, on or before the 15th day of each month from one-third of seven-eighths of all oil sold during the previous month, at the same price as received, which shall not be less than the posted price of the Standard Oil Co. of Louisiana, for that class of oil until the full amount and sum of $177,500 has been paid.

"It is further agreed and understood that parties of the first part shall hold only parties of the second part, or its assigns, responsible for making such payment. First parties hereby agreeing that any company or individual purchasing the oil produced from said above described premises, shall make payment for such oil direct to the Phillips Petroleum Co., or its assigns, and do hereby relieve or release any company or individual purchasing said oil from the responsibility of making any payment to them."

To this contract was attached the "Memorandum of Interest" from which quotatio nhas been made above. It seems to us that, taking the contract alone or the memorandum alone or, as should be done, both together, it is clear that the intention of the parties was that the consideration should consist, first, of a cash payment of $71,000, second, of a further sum of $177,500 to be paid from and only from the proceeds of oil produced on and sold from the leaseholds by appellants. There is no allegation challenging the good faith of appellee as to operation or abandonment nor any claim that, if it had continued operation of the lease, the oil necessary to pay the above balance would or could have been produced or sold.

The decree should be and is affirmed.

STARTING PIPELINES IN SOUTHERN TEXAS

HOUSTON, Tex., July 17.—The Humble Pipe Line Co. has started work on 110 miles of 8-inch line from the Mirando oil fields to tidewater at Harbor City across Neuces Bay from Corpus Christi. Officials expect to have the line in operation by August 10. The Humble Oil & Refining Co. is building six 55,000-bbl. steel tanks at Bruni in addition to the two of the same size now completed.

The Magnolia Pipe Line Co. is assembling material for the 180-mile extension of its 8-inch line from the Luling Field southwest to the Mirando districts. The present 8-inch line between Luling and Beaumont will be looped to provide additional capacity for the extension.

The Houston Pipe Line Co., the natural gas subsidiary of the Houston Oil Co. is laying 80 miles of 16-inch line from Lucas, Live Oak County, to the gas districts in Webb, Duval and Jim Hogg Counties. The company is making a survey for a branch line from its main line to connect with the plant of the Freeport Sulphur Co. at Hoskins Mound, Brazoria County. The sulphur company will use around 30,000,000 feet per day at Hoskins Mound sulphur "mine."

GULF IMPORTS LESS

WASHINGTON, D. C., July 19.—The Gulf Coast import total of 2,251,000 tons was lower than any first quarter during the five years, 1922 to 1926, inclusive, due to the decline in imports of Mexican crude oil which has been largely displaced by California and Mid-Continent oil.

XUM

Basic Features of Heat Exchangers

Certain Fundamentals Must Be Observed in Designing Equipment in Order to Secure Maximum Efficiency

By A. F. Semino*
Gas Engineer, Shell Co. of California
and
E. L. Kallam
Gas Engineer, Mutual Gasoline Co.

Twenty years ago there was no real incentive in the oil industry to recover waste heat. This was partly due to the methods employed and partly to the low cost of fuel. Today, with the increased fuel costs and enlarged scope of operations, necessitating greater heat consumption, heat economy has become essential. The industry is, therefore, vitally interested in the design and operation of heat exchangers.

The present paper represents a brief attempt to point out some of the fundamental factors governing the design and selection of oil to oil heat exchangers. Because of the complexity of the phenomena of heat-transfer the present state of our knowledge is quite lamentable, and the writers are fully sensible of the many shortcomings of this paper.

Physical Characteristics

Having selected the two oils, together with their initial temperatures, between which an interchange of heat is desired, we have automatically introduced four factors governing the heat-transfer over which we have no control. These are the physical characteristics of the oils, namely:

1. Viscosity.
2. Specific heat.
3. Conductivity.
4. Density.

Viscosity

Of these factors, perhaps viscosity is the most important because it primarily controls the thickness of the liquid film adhering to the metallic transfer surface. The thinner this relatively stationary oil film is, the greater will be the exchange of heat between the liquid and the metal. This is clearly illustrated by observing the performance of several identical exchangers operating in series with the same oils. Here all variables are constant except temperatures, which of course changes the viscosities. The result is, that the exchanger with the hottest oil, and hence the lowest viscosity, will give the greatest heat-transfer in every case.

Specific Heat

The specific heat of oils varies directly as some function of the absolute temperature, and as specific heat is a measure of the total heat available for transfer, we see that the second factor is also greater for the exchanger operating with the higher temperatures. General practice is to use 0.5 for the value of the mean specific heat for oil, but this is considerably in error when it is considered that the specific heat ranges from 0.2 to 0.8 in the case of some absorption oils for a temperature range of 50 to 80 degrees Fahrenheit.

Conductivity

The third factor, thermal conductivity, varies as some function of specific heat and specific gravity. For oils whose specific heat increase rapidly with increase temperature we will expect to see a like increase in conductivity. In cases where the specific heat changes very little with temperature, the conductivity will be lower at the higher temperatures but in general it will be found that the conductivity will be somewhat increased at the higher temperatures, so that, other things being equal, the rate of heat-transfer will also be increased.

Density

The last factor affecting the heat transferred is density. Considering the case of two oils having the same viscosity but different densities, the critical velocity for the denser oil will be lowest of the two. We may then say that heat-transfer varies as density. However, in actual practice, it is found that the denser oils possess correspondingly greater viscosities which modify this effect.

Mechanical Factors

While the above four factors affecting heat-transfer are practically beyond the control of the designer, other than in the selection of the oils, the remaining elements are subject to his demands. That is, by proper selection and arrangement of detail, equipment may be developed which will operate with such efficiency as to offset partly some of the disadvantages due to the physical properties of the oils. These mechanical points of selection are:

1. Type of flow.
2. Velocity of flow.
3. Relation of flow.
4. Arrangement and type of heating surface.

Type of Flow

There are two generally accepted types of flow possible—stream-line and turbulent. The writers have for their own convenience made three classifications; stream-line, steady turbulent and for the uncertain or change-over region between these two, unsteady turbulent. Briefly the first type of flow may be described as viscous or telescopic in nature, that is, layers of fluid sliding over other layers. The intermediate state is where the flow is turbulent but where the whirls and eddies take no systematic conformations. The flow in the case of steady turbulent is one where the fluid rolls through the pipe with a vortex motion. With this type of flow pressures and velocities remain constant at any one point over a period of time.

Having the three types of flow, the question arises—which is the most suitable for exchanger practice? Certainly not stream-line, for here the transfer will depend on conduction alone. In the case of unsteady flow, in addition to conduction, convection will be added to help transfer the heat. The objection here is that equal pressure increments do not produce proportional increases in velocity, a factor to consider in the selection of pumping equipment. Because of the definite relation between pressure and velocity and because higher linear velocity is necessary to produce steady turbulent flow, this latter type is essential in all exchanger work. A third advantage of steady turbulent flow is that the motion being rolling and regular assures a thorough mixing of the fluid in contact with the metallic surface.

While the foregoing has had special reference to the fluid within the tubes, it is just as logical to apply the same form of reasoning for the fluid in the shell, or outside the tubes. It is evident that no concise formula is available for ascertaining the type of flow around the tubes, but it is essential that this flow be turbulent in order to obtain a high transfer rate from the oil to the outer tube surfaces.

Velocity of Flow

With any fluid, regardless of viscosity, etc., high velocity will tend to limit the thickness of the liquid film. With high rates of flow there is the element of turbulence which does not permit small liquid particles adhering to the metallic wall of the transfer surface, however, it is difficult to differentiate between velocity and viscosity as to which is the governing influence in determining film thickness. To make this clear, a condition of low viscosity and low velocity might produce a thinner film than the case of high velocity and high viscosity. The preferable combination is, of course, low viscosity and high velocity.

Any factor promoting cleanliness of surface is desirable for attaining maximum heat exchange. Velocity will produce this effect. It seems that with high velocity and hence turbulence, that the bombardment of the transfer surface by the liquid particles has a scrubbing or cleansing effect, not noticeable at low rates of flow. In the case of exchangers designed with baffle plates in the shell, this effect is strikingly shown. These baffles usually have some form of openings through which the fluid flows and generally these apertures are at the point of passage of the tubes through the baffle plates. At these points the velocity of flow is very much greater than at other points between the plates. Observation will bear out the fact that it is at these points that the exterior surface of the tubes are bright and shiny, while at the intermediate points the tube surface will be covered with corrosion and incrustations.

A third advantage of high velocity is the tendency to decrease the formation of gas pockets. The turbulence due to the velocity is such as to stir up the oil and prevent the accumulation of vapors in large reservoirs. This assures the maximum transfer.

Relation of Flow

There are two general arrangements of flow; one where the oils within and without the tubes are flowing parallel to each other, but in the opposite direction, and the second case, where the flow is parallel and also in the same direction. Briefly it may be said that for the parallel-flow less heating surface will be required than in the case of counter-flow in order to transfer the same number of heat units. However, in order to arrive at the same final temperatures using parallel-flow, a greater amount of oil will have to be circulated; hence general practice is to use counter-flow to obtain the advantage of less liquid to handle. Furthermore, the greatest heat economy is attainable with counter-flow.

Due to the fact that in most commercial equipment it is desirable to economize on space, passes are resorted to in both the tubes and the shell. This introduces in a multipass exchanger both types of flow. To compensate for those portions of the apparatus in parallel-flow it is customary to increase the velocity through these parts which tends to counteract any loss in efficiency by reason of the parallel-flow.

Baffles are also used to produce turbulent flow over the exterior of the tubes. This generally introduces complications in the direction of flow so that at various points the flow may even be at right angles to the tubes. It seems that such flow normal to the tube surface promotes high transfer, in fact, exchangers built upon this cross-tube flow principle, in order to obtain turbulence without baffling, give exceedingly high transfer efficiencies.

Two choices are available regarding the arrangement of oil, that is, whether the hot or cold oil should be in the tubes. Contrary to general practice, the writers advocate the use of hot oil within the tubes. The reason for this contention is that high velocity should be associated with high temperature. With hot oil within the tubes, there is available more heat for entering the cold oil, inasmuch as the temperature difference between the cold oil and the air is less than in the case of hot oil and the air. Consequently, the heat lost by radiation from the shell of the exchanger will be less for the case of cold oil on the outside of the tubes. Hence, with hot oil within the tubes, a greater temperature difference between ingoing and outgoing oil will be reached, which will also be true for the cold oil. This will result in the exchange of a greater amount of total heat.

Arrangement of Heating Surface

With progressive lengths of heating surface, we find a gradual falling off in temperature and pressure of the oil. Obviously the diameter and length of the tubular heating surface is far from being without influence upon the heat transferred.

Small tube diameter and its allied turbulent flow allows a greater number of molecules of the oil to come in contact with the tube surface than would otherwise be the case with large diameters. Diameters should never exceed five-eighths of an inch.

The temperature of a hot oil flowing through a long tube decreases with the length of the tube. This means that the temperature difference between the oil and the tube surface also decreases with the length of the tube. As the transfer varies directly as the temperature gradient, it is readily seen that the ends of long tubes are very much less effective than the entering portion. Thus it is far better to use, instead of one long tube, a great number of shorter tubes in parallel, keeping in mind the velocity factor. The length of the tubes should never exceed 300 times the internal diameter.

The spacing of the tubes has an effect upon the condition of flow upon their exterior. Close spacing of the tubes forces the oil in the shell to be broken up with the result that more oil particles come in contact with the heating surface. This distance between tube surfaces should never be greater than one-half the internal tube diameter.

With regard to the arrangement of baffles on the exterior of the tubes for obtaining turbulence, little may be said. This knowledge can be gained only through experience of trial, that is, actually testing out the various types and

HEAT EXCHANGE FACTORS

Since heat-transfer takes place between two oils through a metallic surface, it is necessary to consider the characteristics of the two liquids, as well as the surface arrangement in the design of a heat exchanger. This is necessary if the exchanger is to meet specific operating conditions with a high degree of efficiency.

The maximum recovery of heat is governed solely by the economic limitations. Efficiencies approaching unity are attainable providing sufficient transfer surfaces are used and high velocities employed. Present fuel costs do not warrant the recovery of more than 75 per cent of the available heat.

*Presented at the annual meeting of the California Natural Gasoline Association, Los Angeles, Calif.

arrangements of baffles. It is our belief, however, that if baffles are to be used, they should be installed in such a manner as to use all of the available pressure drop. However, since friction loss is also a direct function of velocity, increasing the velocity beyond a maximum point results in pumping costs in excess of the value of the additional heat transferred. Thus a point, which can be determined only by experience, is reached beyond which it is not economical to go because the additional heat saved by increasing the velocity of flow will not pay a profit which is attractive.

The metal of which the tubes or heating surface are made is generally dictated by consideration of resistance to corrosive action of the oil. Such problems are obviously special and to be decided in each particular installation. Generally tubes of admiralty metal are used. These should be of thin gauge, although the conductivity of the tube material may be neglected as far as choice is concerned. An advantage is of course to have a smooth surface, both outside and in, so that it will offer no irregularities for the accumulation of dirt, scale, etc. Furthermore, smooth surfaces result in attaining high velocities with a minimum pressure drop.

ROCKY MOUNTAIN AREA

(Continued from Page 46)

water in the sand and were abandoned. Two new wells are being started.

Runs From the Fields

Salt Creek	50,270
Teapot	560
Big Muddy	3,400
Grass Creek	3,120
Elk Basin	750
Greybull	20
Rock River	2,870
Notches	190
Rex Lake	220
Lance Creek	1,440
LaBarge	200
Poison Spider	1,310
Osage	350
Hamilton Dome	1,120
Lander	310
Byron	30
Lost Soldier	4,830
Ferris	90
Simpson Ridge	180
Cat Creek	2,780
Lake Basin	170
Sunburst	25,000
Hogback	580
Rattlesnake	1,117
Artesia	3,000
Florence	425
Moffat	3,774
Tow Creek	485
Fort Collins	5,155
Iles Dome	59
Boulder	25
Rangely	100
Total	113,930

PROPERTIES IN GASOLINE DIFFER IN IMPORTANCE

(Continued from Page 32)

corrosive quality of the gasoline must be determined by the copper strip test.

If gasoline for motor fuel has corrosive qualities, it will attack the copper and brass parts with which it comes into contact, forming black scaly copper sulphid. Not only does this corrosion sometimes eat through and destroy thin copper parts like screens, floats, etc., but these black scales fall off and accumulate in various places in the gasoline stream and choke the line. All these are seriously bad effects and therefore good motor gasoline, no matter what other qualities it may possess, must be noncorrosive.

Sometimes this black copper sulphid is mistaken by the user or auto mechanic for carbon and complaint may arise that carbon forms from the gasoline in the copper pipes supplying the gasoline to the engine. This black deposit is not carbon, but copper sulphid, and is due to the corrosive nature of the gasoline used.

By all means, all specifications for gasoline of all grades for use as motor fuel should call for the noncorrosive property.

Total Sulphur Content

High sulphur content is deleterious because the products of the combustion of the sulphur when dissolved in water (as for example in the condensed moisture arising from the combustion of the gasoline itself) has a corrosive action on all metal parts, especially on iron and steel parts, with which it comes into contact.

Therefore sulphur should be kept low and specifications should limit the total sulphur content, no matter in what form or forms of combination it may exist in the gasoline.

It is not feasible to attempt to eliminate it altogether because practically all gasoline is made from crudes that contain more or less sulphur, so gasolines free from sulphur do not exist, and the cost of removing all the sulphur would be prohibitive.

Color Instability in Sunlight

It has become well known since glass filling station measuring bowls have become the style that practically all gasoline, but especially such as contains cracked products, turns cloudy and brownish when exposed for longer or shorter time to sunlight, or even to direct daylight. Sometimes this discoloration causes a brownish gummy deposit to form on the glass of the measuring bowl.

As already stated, gasolines that react positive to the doctor test tend to be more stable in color when exposed to sunlight.

Now if a few moments thought is given to this phenomenon, it will readily be seen that the first impressions concerning the detrimental effects of this property are not well founded. First, this discoloration and gum formation does not take place in the dark, where all motor gasolines are normally stored and used, and therefore no damage or ill results need be feared in actual use from this property. All that is necessary to avoid every trace of disagreeable effects from this cause, is to avoid filling the glass measuring bowls until the customer is to be served. But if the gasoline is left in the glass measuring bowl for any length of time from one customer to the next, of course, the brown gummy matter is to be expected. A still better remedy is to avoid glass measuring bowls as indeed some of the larger oil companies do.

Little or nothing is known as to the why of the formation of this discoloration and cloudiness in the sunlight, but the minute trace of sulphur existing in the gasoline is usually blamed for it. But that is by no means a certain diagnosis. Up to the present time successful processes of treatment of the gasoline to prevent this influence of light have been conspicuous for their absence or rarity.

At present, therefore, this property should be omitted from the specifications.

Unsaturated Hydrocarbons

All gasolines contain greater or smaller proportions of those hydrocarbons with less than the full amount of hydrogen which its carbon content can hold in chemical combination. These hydrocarbons are therefore called unsaturated. But the proportion of these unsaturated hydrocarbons is relatively small in most straightrun gasolines, and it is usually high in most cracked gasolines.

Formerly, for some mysterious reason, it was believed by all that these unsaturated hydrocarbons were injurious, or at least not so good as the saturated ones, when present in gasoline. This false idea, however, is rapidly giving way before the truth, namely, that the unsaturated hydrocarbons, if not present in excess are actually better than the fully saturated hydrocarbons formerly so much preferred. The unsaturated give more power, more mileage and act largely as antiknock, or better stated, as nonknock fuels.

Specifications, therefore, should not tend to keep down the percent of unsaturated hydrocarbons but should encourage their presence in reasonably large proportion.

Knock

There are several causes for knock in a gasoline motor, some of which are not due to the gasoline. These, however, will not be discussed here, neither will the theories which attempt to explain knock be discussed. Suffice it to say that under a given compression in the motor cylinder, other conditions being the same, the highly saturated hydrocarbons tend to knock more than the less saturated ones, those commonly known as unsaturated.

These unsaturated hydrocarbons, as has already been stated, are distinctive of the cracked motor gasolines. Therefore, all other factors being equal a cracked gasoline will be better because of its less knock effect, than a corresponding straightrun gasoline, and that because of its content of unsaturated hydrocarbons.

Now, since most cracked gasolines are more or less yellow, being colored by a volatile yellow coloring matter, it follows that a yellow color in gasoline may actually be an indication of superior quality. So another popular delusion is bound sooner or later to have an end, namely, the delusion that a white color is a sign of good quality in gasoline, when as a matter of fact a yellow color may indeed be that very sign of quality.

Cracked gasolines are also prone to have heavier gravities, therefore it may finally come to pass that heavy gravity gasolines will be sought in preference to the lighter ones, instead of the reverse as at present. In other words, a heavy gravity, pale yellow, or pale straw colored gasoline, if of proper distillation range will be likely to knock less, and to give longer mileage and greater hill-climbing power, than a high gravity, white colored, straightrun gasoline of the same distillation range.

Use of Benzol

To reduce or eliminate knock from highly saturated or highly refined gasoline, it has become customary to add various percentages of benzol. Now benzol is a product of the destructive distillation of coal and is formed only in small proportion in that distillation. Therefore the supply of benzol is limited and consequently the price is and always will be higher than that of gasoline. However, the presence of sufficient benzol to communicate nonknock to gasoline is very desirable. Benzol can also be prepared by the pyrogentic decomposition of petroleum oils, and doubtless as more benzol is required, some will be produced from that source. This, however, is not likely to reduce its price. Some other knock reducers are also used, for example, tetraethyl lead, the so-called ethyl gasoline.

Among the factors which tend to cause knock is the presence of high boiling hydrocarbons, especially high boiling saturated hydrocarbons, in the gasoline. Hence high endpoint gasolines tend to knock more than low endpoint gasolines, all other factors being equal. However, this tendency of high boiling constituents to knock can be reduced by the presence of high proportions of unsaturated, that is to say, cracked, hydrocarbons, and more especially of benzol, which is really a variety of unsaturated hydrocarbon. Thus, a straightrun naphtha of 480 degrees Fahrenheit endpoint blended with benzol 50/50 will not knock in an auto engine whose compression just allows 437 endpoint straightrun gasoline to be used without serious knock. This is true even if the 480 endpoint naphtha itself knocks badly in the same auto engine.

The unsaturated hydrocarbons of petroleum, either natural or cracked, are not as powerful nonknock as benzol, but their presence reduces proportionately the badly knocking saturated hydrocarbons, substituting for them the much better nonknock unsaturated ones.

The characteristic of knock of course cannot be included in motor gasoline specifications, without making it necessary to outfit the testing laboratories both of the refiner and of his customer with expensive equipment for testing this characteristic. Nevertheless this discussion on this subject is included here because of its bearing on some of the other important and more easily measurable characteristics of gasoline.

Odor

Odor should not be considered at all in connection with motor gasoline. Unless there are leaks of gasoline, or of gasoline vapors, the odor will not be perceptible. And leaks of course are dangerous from another direction. In fact a strong odor might be considered in the light of a safety factor that will make known dangerous leaks.

In view of the naturally strong odor of cracked gasoline, and the known good qualities of that product, a mild odored gasoline will on the face of it be suspicious as one free from the desirable cracked constituents.

Moreover, the more volatile the components of natural and other gasolines the more powerful will be the odor, so here again strong odor is rather an indication of good quality, being a sign of the presence of the more volatile constituents so much desired and needed in proper proportion in order to give pep and snap to the gasoline in use.

Besides all this those constituents that give odor are combustible and help to give power to the gasoline. It is therefore wasteful of natural resources to remove them from the gasoline. This of course does not apply to those constituents that have both a bad odor and also show such detrimental qualities as corrosion or gum deposits. All good refiners will, of course, remove these deleterious constituents in order that their product may be of satisfactory quality in these other characteristics.

Nevertheless, since these detrimental constituents are by no means all, nor even the largest proportion of the odorous constituents of gasoline, the odor should not be the characteristic considered in the specifications, but the other characteristics, such as corrosion, gum formation, etc.

In short, odor should have no place in the specifications.

Gum Deposits

Some poorly refined gasolines will deposit gummy sediments even in the dark, and in the carbureter and other undesirable places. This very detrimental effect, however, is readily avoided by proper treatment in the refinery, and no reputable refiner will permit gasoline showing this characteristic to leave his plant.

It would be well to include in the specifications a clause requiring gasoline to be free from constituents that form gum in the dark.

Summary

Items suggested to be included in specifications for a good quality motor gasoline:

Volatiltiy: Winter initial boiling point, not above 115, not below 90 degrees Fahrenheit; summer initial boiling point, not above 120, not below 100; endpoint, not above 437; 20 per cent, not above 206; 50 per cent, not above 306; 90 per cent, not above 420.

Noncorrosion: Must be noncorrosive to copper strip test.

Unsaturated: Unsaturated by Bott's method should be not less than 10 per cent.

Gum-forming Constituents: Constituents forming gum in the dark shall be absent.

Total Sulphur Content: Total sulphur should not be over 0.1 per cent.

Leave out all reference to gravity, color, odor, doctor test and light stability.

MAGDALENA SYNDICATE'S OPERATIONS IN COLOMBIA

B. F. Griffiths, secretary of the Magdalena Syndicate, advises that the Magdalena Syndicate has not taken over the Granada Oil Co. but did purchase the Nate lease and all of the physical and drilling equipment formerly owned by the Granada in Colombia. Furthermore, he says, the Magdalena Syndicate is not controlled by Mr. MacFadden and the Carib Syndicate; Mr. MacFadden is one of the principal stockholders and is vice president of the company, but the Carib Syndicate has no interest whatever in the Magdalena Syndicate.

The Magdalena Syndicate, Mr. Griffiths says, has one set of tools working on its initial well on the Nate lease and at present is drilling at a depth of over 1,015 feet. An additional drilling crew is en route to Colombia, and it is the intention of the company, he says, to begin at an early date an extensive development campaign.

XUM

REFINING AND MARKETING

HAWKEYE CO. MERGED WITH BLACK HAWK CO.

WATERLOO, Iowa, July 19.—Merger of the interests of the Black Hawk Oil Co. of this city and the Hawkeye Oil Co. of South Dakota, has been announced by R. W. McDowell, vice president and general manager of the Black Hawk Oil Co. The consolidated company will operate as the Black Hawk Oil Co. and will continue under the direct manager of Mr. McDowell and J. T. Dettner, sales manager.

The merger under the Black Hawk name was consummated because of the confusion between the Hawkeye Oil Co. of South Dakota and another Hawkeye Oil Co., a Delaware corporation, operating in Iowa. F. E. Kistler of Denver, Colo., for some time owned the controlling interest in the Hawkeye Oil Co. of South Dakota and with his recent purchase of the Caward interests in the Black Hawk Oil Co, the merger was arranged.

The company, which will continue with Waterloo as headquarters, will have 50 bulk stations and 60 service stations in Iowa and one bulk station in Minnesota. Mr. Kistler is president, Mr. McDowell, vice president and general manager, L. J. Berry, secretary, and F. E. Brocksus, assistant secretary.

Department heads, announced by Mr. McDowell, are: L. J. Berry, accounting and auditing; F. B. Brocksus, traffic and purchasing; E. E. Nabinger, credits; E. J. Kortemeyer, repair and maintenance; J. T. Dettner, sales and operation; A. M. Holt, warehouse. All are Waterloo residents.

Operation of the local company will be substantially as in the past, except that many constructive improvements will be made, particularly from the standpoint of policy. The plant here now has a storage capacity of 500,000 gallons of gasoline and oils.

The status of the Hawkeye Oil Co. of Delaware remains unchanged and will continue to conduct its business from its principal office at the corner of Miles and McKinley Streets under management of H. C. Wurster, who was recently elected president of the company.

INDIANA CO. DENIES RED HAT SETTLEMENT

CHICAGO, July 16.—The Standard Oil Co. of Indiana has denied the statement of L. V. Nicholas on behalf of the Independent Oil Men of America that the Standard is attempting to settle out of court the controversy over the "Red Crown" and "Red Hat" trade-marks.

The attorneys for the Standard say that the suggestion for a continuance of the hearing before the Commissioner of Patents for 90 days from July 19 was first made by the attorney for the Independent Oil Men and the motion for a continuance was acquiesced in and not opposed by him and that no settlement will be made by the Standard that does not involve the abandonment of the "Red Hat" brand by the Independent Oil Men.

The Standard's attorneys say they are ready to have the case tried at any time, and if Mr. Nicholas desires an earlier hearing and his attorney can arrange therefor the Standard will gladly consent to an immediate hearing and have so notified the attorney for the Independent Oil Men.

NEBRASKA OIL MEETING

LINCOLN, Neb., July 19.—A special program is being arranged for the western district meeting of the Nebraska Independent Oil Men's Association to be held at North Platte on August 31, according to C. M. Sutherland, secretary of the state association.

GASOLINE CONSUMPTION INCREASED 17.5 PER CENT FIRST FIVE MONTHS

Gasoline consumption in 32 states, as indicated by reports made by wholesalers and dealers in various states, under provisions of the gasoline tax laws or gasoline inspection laws, totaled for the five months ending with May, 1926, 1,571,227,000 gallons, compared with 1,337,498,000 gallons for the corresponding period of 1925, an increase of 233,729,000 gallons, or 17.5 per cent.

Gasoline consumption in the 32 states for the month of May, 1926, totaled 373,434,000 gallons compared with 328,804,000 gallons in May, 1925, an increase of 44,630,000 gallons or 13.6 per cent. May, 1926, daily average consumption of 12,046,000 gallons, compared with a daily average of 10,952,000 gallons in April, 1926, indicates an increase of 10 per cent. Figures for the states of Iowa, Michigan, Nebraska, Ohio, Rhode Island and Wisconsin are shown for the year 1926; comparative figures for 1925 not being available. The figures giving the quantity of gasoline sold or offered for sale as reported under various laws follows: In some cases they are gross figures before deductions allowed for small quantities of gasoline reshipped or sold for other than taxable use, the tax upon which if paid, is subsequently refunded. All figures are subject to revision.

Gasoline Consumption By States, May, 1926

	Month of April, 1926 Gallons	Month of May, 1926 Gallons	May, 1925 Gallons
Alabama	10,599,000	11,102,000	9,390,000
Arizona	2,518,000	2,711,000	2,459,000
Arkansas	8,266,000	9,463,000	6,706,000
Colorado	8,719,000	9,831,000	8,420,000
Delaware	1,031,000	2,594,000	2,040,000
Dist. of Col.	4,269,000	4,688,000	4,008,000
Florida	25,206,000	24,297,000	15,338,000
Georgia	13,734,000	14,962,000	12,226,000
Idaho	3,992,000	3,457,000	2,824,000
Indiana	20,590,000	28,616,000	21,236,000
Kansas	17,164,000	20,471,000	17,398,000
Kentucky	6,822,000	6,535,000	8,385,000
Louisiana	11,442,000	11,372,000	10,026,000
Maine	2,143,000	5,745,000	6,210,000
Maryland	9,369,000	10,370,000	9,357,000
Minnesota	21,325,000	26,513,000	21,845,000
Mississip'i	7,581,000	9,066,000	8,603,000
Missouri	20,267,000	21,132,000	25,221,000
Nevada	789,000	952,000	818,000
N. Hamp.	1,838,000	3,686,000	3,575,000
N. Mex.	1,852,000	2,217,000	1,807,000
N. Carolina	14,062,000	15,188,000	20,090,000
N. Dakota	6,662,000	7,573,000	5,451,000
Oklahoma	15,499,000	18,518,000	14,310,000
Oregon	8,820,000	9,716,000	8,613,000
S. Carolina	7,730,000	7,442,000	6,884,000
S. Dakota	6,527,000	7,642,000	6,269,000
Texas	39,022,000	43,014,000	38,376,000
Utah	2,762,000	3,741,000	2,840,000
Virginia	11,691,000	12,516,000	11,345,000
Washington	15,010,000	16,087,000	14,674,000
Wyoming	1,263,000	2,235,000	2,060,000
Total	328,564,000	373,434,000	328,804,000
Daily avg.	10,952,000	12,046,000	10,607,000
Increase over previous year:			
Amount	.....	44,630,000	.....
Perc'tage	.....	13.6%	.....
Iowa	20,703,000	23,426,000	21,011,000
Michigan	38,710,000	50,028,000	41,793,000
Nebraska	12,656,000	13,280,000	11,809,000
Ohio	51,367,000	63,050,000	52,413,000
Rhd. Island	3,914,000	4,915,000	.....
Wisconsin	19,828,000	25,240,000	22,362,000

OKLAHOMA CONSUMING 200,000,000 GALLONS

OKLAHOMA CITY, July 19.—About 200,000,000 gallons of gasoline are being consumed annually in Oklahoma. Homer Bird, director of the gasoline tax bureau in the state auditor's office, reports that for the six months of this year ending June 30, 95,770,850 gallons of gasoline were taxed on the 3-cent a gallon basis. This was an increase of over 15,000,000 gallons above that taxed during the first half of the year 1925.

The amount of tax collected during this period was $2,786,931, compared with $2,160,850 during the same period of last year. One-third of the amount, or $921,000, was remitted to counties for use on secondary highways, and the remainder, $1,842,000, was turned into the state highway construction and maintenance fund.

The cost of collection, Mr. Bird says, was one-fourth of 1 per cent. Salaries amounted to $5,550 and operating expenses to $2,096. The bureau collected during the semi-annual period $3,778 in penalties and found gasoline that had previously been overlooked on which $9,677 was collected.

During the years 1923, 1924 and 1925 the auditor's tax bureau turned $3,839,120 to counties for road purposes and during 1924 and 1925 it turned $5,064,129 to the State for highway construction and maintenance.

The consumption of gasoline in 1925 amounted to 176,753,177 gallons.

NEW GASOLINE PLANT NEAR WOODSON, TEXAS

Humble Oil and Defining Co. and the Reiter-Foster Oil Corp. are building a natural gasoline plant near Woodson, Throckmorton County, Texas. The first unit will cost approximately $558,000 and will have a capacity of 20,000 gallons of gasoline daily.

The plant will be under the management of the Humble Oil and Refining Co. which will have 75 per cent ownership. All properties of the Humble Oil & Refining Co., the Reiter-Foster Oil Corp. and the Red Bank Oil Co. are under contract to supply the gas for the plant.

The first unit will be in operation by the last of September. Additional units will be constructed at the discretion of the Humble Oil and Refining Co. A pipeline also will be laid to deliver gasoline at the railroad, 40 miles distant.

RAIL RATE DISCUSSED AT N. P. A. MEETING

OIL CITY, Pa., July 19.—Discussion of freight rates featured a meeting of members of the National Petroleum Association from a number of districts in this section here last Wednesday. Proposals to seek a reduction in rates on petroleum products from this section of Pennsylvania to eastern points were made.

A proposal to reduce export rates also was discussed as well as the question of establishing a barreling in transit arrangement at the Atlantic Seaboard.

The meeting was presided over by Willis Crane, traffic attorney from the Washington office of the association. Approximately 25 members of the association were present.

OKLAHOMA CITY STATIONS

OKLAHOMA CITY, Okla., July 19.—It has been reported here that the Producers & Refiners Corp. of Denver, Colo., will establish state headquarters in Oklahoma City for its marketing department within 10 days. It is stated the company plans to purchase at least 50 service stations in Oklahoma in the near future.

BOARD MEETING POSTPONED

CHICAGO, July 17.—The meeting of the board of directors of the American Oil Men's Association has been postponed until July 23, at the offices in this city. It is expected that at that meeting a successor will be chosen to the late H. G. James.

CHICAGO DISTRIBUTORS HAVE LABOR TROUBLE

CHICAGO, July 19.—The local distributors, large and small, are threatened with a strike of the station attendants and the tankwagon drivers. The present scale is $140 per month for attendants and $175 per month for drivers. The former ask and advance to $150 per month and the latter to $190 per month. There are so many in the employ of the industry that the total added burden would be considerable. The larger companies would feel it most and should a strike take place it is probable some smaller companies would grant the advance and continue to supply their customers while the real fight would have to be made by the larger employers. The demands of the union were made known 10 days ago and refused by the employers who felt the present scale for an 8½-hour day was equitable considering the type of employes and the opportunity of advancement.

At its meeting this week the reply of the employers was laid before the union and it was voted to give the officers authority to call a strike if necessary to secure the advance. A further conference between the representatives of both parties was arranged for Wednesday, July 21, and until then it is understood by the employes at least that there will be no walkout.

MICHIGAN OIL JOBBERS HOLD SUMMER MEET

GRAND RAPIDS, Mich., July 19.—The Michigan Independent Oil Men's Association's summer meeting at Mackinaw Island July 15 and 16 was highly successful, not only from the standpoint of attendance but also for its constructive and educational program. The sentiment of the meeting was that Mackinaw Island should be chosen permanently for summer meetings. The business sessions were well attended and the ladies most delightfully entertained.

D. E. Montgomery of the Wisconsin department of markets, gave a very successful address on unfair competition and R. L. Welch, secretary of the American Petroleum Institute, delivered an address entitled "The Jobber and the Public," which was highly instructive and well received. Prof. G. G. Brown, of the University of Michigan, gave an illustrated and informing talk on the value of natural gasoline in motor fuels. Everyone was highly pleased with the meeting and its setting which is one of the most delightful in the country. The attendance was beyond anticipations and made a very good showing.

RICKETTS WITH SPENCER PET.

CHICAGO, July 17.—C. M. Ricketts, a well known oil man, formerly connected with Gustafson & Spencer and later with the Caddo Central Oil & Refining Co., has been added to the staff of the Spencer Petroleum Co. of this city, and will do special work at the various offices.

INSPECTION AND TAX LAWS

LINCOLN, Neb., July 19.—Unification of the state gasoline inspection and tax collection departments is being advocated by the Nebraska Independent Oil Men's Association to permit more economical checking.

NEW MARLAND STATIONS

Marland Refining Co. announces the opening of new service stations at Fort Scott, Kans., and Red Oak and Clarinda, Iowa. Construction also is being started on a number of other new stations.

SPECIAL CONSTRUCTION

Special Intricate STEEL PLATE

work requires more equipment and experience than ordinary work.

GRAVER SHOPS

continually have special work under construction.

Graver Builds

Tanks
Welded
Riveted
Spun
(Riveted, Inside & Outside Welded)
Structural Supports
Tower Tanks
Standpipes
Any Size Tanks
Erected Anywhere

Refinery Equipment

Jenkins Cracking Process

Stacks-Breechings

General Steel Plate Construction

Water Softeners
Hot Process
Cold Process
Zeolite
Household

Filters—*Pressure*

Purifying Systems *for* **Swimming Pools**

GRAVER *Corporation* Founded 1857
EAST CHICAGO, INDIANA

NEW YORK Grand Cent. Term. | CHICAGO Steger Building | TULSA Atlas Life Bldg. | HOUSTON West Building

Brief Items for Plant Operators

GREATER "OILINESS" NEW LUBRICANT CLAIM

An entirely new principle of lubrication has been embodied in the oil which has been developed and recently placed on the market by the Standard Oil Co. of New Jersey. The oil, it is claimed, has solved the problem of spotty lubrication which has puzzled engineers since the perfection of the internal combustion engine.

The oil is a lubricant of greater "oiliness" and possesses many advantages, it is claimed, over the best of the old type oils. It is the result of three years of research and exhaustive tests by the Standard Oil Co. engineers.

The oil has been developed to eliminate all areas of partial lubrication and cover dry spots which permit the grinding of metal and scoring of cylinder walls. The engineers worked on the theory that such an oil should not be too heavy but rather should possess greater oiliness and qualities to "stay put."

Tests conducted by the Standard Oil Co. showed that the new oil permitted almost frictionless operation, had low carbon forming qualities, tended to soften and clean out the cylinder walls, piston heads and spark plugs and provided greater mileage both for gasoline and oil.

NEW SKIMMING PLANT NEAR BORGER, TEXAS

Construction work has started on the building of a skimming plant near Borger, in the Panhandle Field of Texas, by the Amarillo Producers & Refiners Corp. This company owned the small skimming plant at Panhandle, Tex., formerly known as the Big Four Refining Co. This plant is being dismantled and part of the equipment will be used in the construction of the new refinery just east of Borger.

The new plant will have railroad facilities near the town of Isom when the Santa Fe railroad completes an extension of its line to that point from Panhandle. Isom is just south of Borger. The skimming plant will have a capacity of 2,500 bbls. daily and is expected to be in operation about September 1. It will have both pipe and shell stills and baffle towers.

The same company started operating a portable natural gasoline plant at the refinery site last week. The company owns the gas rights on several leases in that section of the field and expects to handle the output with four portable units. All will be close enough so that the output can be pumped to the refinery for blending purposes. The company also has some production in that section. J. D. Wrather is president and general manager of the company. Offices are located in the Amarillo Building, Amarillo, Tex.

STATE OF TEXAS TESTS

AUSTIN, Tex., July 19.—The State Highway Department has reopened the question of its $500,000 contract for motor lubricants, and is making experiments to determine whether Texas oils can be adopted, according to information received by the State Board of Control which purchases the supplies for the department. Original specifications called for paraffin base oils, produced only in eastern fields. Texas oil producers protested that the Texas asphalt base oils would serve, and could be supplied from Texas fields at a saving of large freight expense. The highway department is making a series of tests with the Texas oils, and is holding up the award of a contract until it is determined whether the asphalt oils may be used.

NEW ARKANSAS PLANTS

SHREVEPORT, La., July 19.—Two new natural gasoline plants are giving Arkansas 8,000 gallons more of natural gasoline. One is the recently completed Simms Oil Co. absorption plant on the N. B. Murphy lease, Section 29-15-15, which is making 4,000 gallons daily. The other is the Lion Oil & Refining Co. three-unit compression plant on the Lion's Murphy lease in Section 29-15-15 which is manufacturing a similar amount of gasoline.

ELECTRIC REFINING PROCESS

OKLAHOMA CITY, Okla., July 17.—A refining company that purposes refining crude oil by an electrically operated process, which may install a plant in Oklahoma City, has been incorporated here by J. L. McCabe of Wichita, Kans., E. A. Hutcheson of Enid and D. M. Carey of Oklahoma City. It is called the Electrol Refining Co., McCabe process, and the capital stock is $250,000.

DUBBS UNITS AT EAST CHICAGO

The Roxana Petroleum Corp. has started the construction of six Dubbs cracking units at its refinery located in East Chicago. The units will have a capacity of 1,000 bbls. daily and are the latest Dubbs design.

BUY CLARENDON PLANT

CLARENDON, Pa., July 19.—L. C. Jamison and associates of Warren, Pa., have purchased the Crown Central Petroleum Co. refinery here for approximately $150,000. The plant has been under lease to the Lyons Refining Co.

SAFETY COUNCIL DATES FOR "UNLOADED GUN"

Ray E. Miller, director of the Petroleum Safety Council, has completed the Arkansas and Louisiana itinerary for the showing of the picture entitled "The Unloaded Gun." This is the sixth picture of the Petroleum Safety Council and is said to be most instructive and interesting ever shown by the council. The picture deals with the safety problem both in refining and field work. Superintendents of refineries are urged to have as large attendance of their employes as possible when the picture is shown in their section.

Following is the itinerary for Arkansas and Louisiana with committee chairmen:

Smackover, Ark., July 22, Horace Gandy, Gulf Production Co.

Camden, Ark., July 23, George Hartung, Houston Oil Co.

Stephens, Ark., July 26., C. R. Smith, Louisiana Oil Refining Co.

Haynesville, La., July 26, W. B. Charlton, Ohio Oil Co.

Homer, La., July 27, H. H. Markey, Gulf Production Co.

Cotton Valley, Ark., July 28, F. S. Sealy, Humble Oil & Refining Co.

Shreveport, La., July 29, Gas Center Refinery, Henry Delong, Louisiana Oil Refining Corp.

Shreveport, La., July 30, Bossier City Refinery, Charles Doughty, Louisiana Oil Refining Corp.

Bellevue, La., July 31, Joe Danner, Louisiana Oil Refining Corp.

Mooringsport, La., August 2, J. O. Woodburn, Gulf Refining Co. of Louisiana.

Oil City, La., August 3, D. T. Harrington, Louisiana Oil Refining Corp.

Gilliam, La., August 4, R. A. Miller, Louisiana Oil Refining Corp.

Harmon, La., August 5, D. E. Farris, Fortuna Oil Co.

J. T. CANTRELL DIES

J. T. Cantrell, fuel oil inspector for the Santa Fe Railroad, died at his home in Argentine, Kans., Sunday morning following an illness of four weeks. Mr. Cantrell was intimately acquainted with practically every refinery executive, sales manager and plant superintendent of the refineries along the Santa Fe Railroad from Galveston, Tex., to Kansas City, Mo. His duties as fuel oil inspector kept him closely in touch with the refining industry. He was between 50 and 55 years old and is survived by his widow and a daughter.

AMONG THE TECHNICAL MEN

H. T. Bennett, who only a few weeks ago was appointed chief chemist for the Mid-Continent Petroleum Corp. at its West Tulsa refinery, is a technical man who has had a notable rise in the chemistry field of petroleum refining. He perhaps is better known through numerous articles which he has written recently on a variety of technical subjects.

H. T. Bennett

Mr. Bennett was chosen chief chemist in June, having been promoted to that position from chief research chemist. Except for one year, 1919, he has been with the Mid-Continent Petroleum Corp. since 1917 as chief inspector and in charge of the test laboratories.

This position Mr. Bennett resigned to become chief chemist for the Transcontinental Oil Co. at its Fort Worth plant, but he returned in 1920 to Cosden & Co. as research chemist. In 1923 he was promoted to chief research chemist.

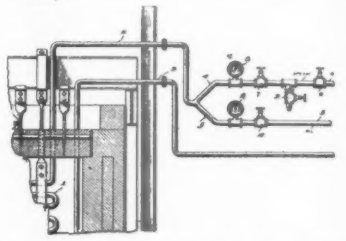
Mr. Bennett also has had experience in the laboratories of the Sun Oil Co. at its Marcus Hook, Pa., plant. He worked in these laboratories, holding positions from tester to chemist, during his vacations from university. During the early summer of 1917, before joining Cosden & Co. (now Mid-Continent Petroleum Corp.), he was chemist at the Oklahoma Agricultural and Mechanical College experiment station at Stillwater.

Working his way through school as student assistant instructor in chemistry and science, Mr. Bennett received his bachelor of science degree from the University of Delaware at Newark in 1915, his master of science degree from the University of Nebraska at Lincoln in 1916 and then did postgraduate work at the University of Missouri at Columbia in the autumn of 1916.

He is a native of Wilmington, Del., where he received his high school training. He is a member of several scientific societies.

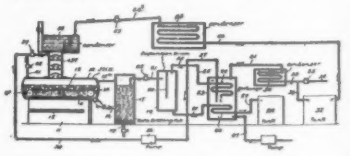
Recent Patents

1,585,381. Apparatus for Controlling the Supply of Steam and Oil to an Oil-Cracking Still. Charles J. Greenstreet, Chicago, Ill., assignor to Gasoline Corporation, Chicago, Ill., a corporation of Delaware. Filed December 27, 1919. Serial No. 347,811. 2 Claims. (Cl. 196—63.)



1. An apparatus for treating heavy hydrocarbon oils which comprises a heating coil, means for heating said coil, an intake pipe leading to said coil and having two intake branches, one of said branches being adapted to be connected to a source of steam pressure and having therein a shut-off valve, a regulating valve for controlling the admission of steam, and a valve controlled vent to the atmosphere located between said shut-off valve and said regulating valve, and the other of said intake branches being connected to a supply of oil and having a shut-off valve therein.

1,585,233. Process for Continuously Distilling and Cracking Hydrocarbon Oils. John W. Coast, Jr., Tulsa, Okla., assignor, by mesne assignments, to Doherty Research Co., New York, N. Y., a corporation of Delaware. Filed July 14, 1919. Serial No. 310,856. 10 Claims. (Cl. 196—18.)



7. The hereindescribed method of treating hydrocarbon oils which consists in subjecting a body of oil to the simultaneous action of heat and pressure and distilling off the lighter fractions and simultaneously cracking the intermediate boiling point products, withdrawing a portion of the oil body under pressure, releasing the pressure on the said portion to withdraw the intermediate boiling point products therefrom and passing the said products into contact with the supply of oil delivered to the oil body under treatment in order to heat the said supply of oil and to distill the lighter hydrocarbons therefrom.

REFINING PANHANDLE CRUDE HAS PROBLEMS

(Continued from Page 29)

increases in the shell stills so that the third shell still has a temperature of 600 degrees. This is approximately 100 degrees higher than the usual practice in making a gasoline cut.

It follows that these high temperatures and pressures add to the operating difficulties. With the aid of the several control instruments it has been possible to adjust the operation, however, so that no more labor is required than with any other crude battery of similar size.

The question asked by most operators would probably be concerned with the corrosion troubles in the stills and towers and also the sulphur content of the finished products. The method of settling out the salt water has been explained. There is still some salt left in the crude and this settles out in the pipe still and the first three shell stills. This does not interfere a great deal, however, with the operation.

In the case of the pipe still, the unit is shut down about every 10 days and cleaned. After the fires have been pulled and the pipe cooled by running the crude through it, the pipes are steamed. Then water is forced through the pipe, dissolving the salt, leaving the tubes clean. The pipe still is generally back on stream within five hours after a shut down.

In the case of the shell stills the clean-out takes place about once a month. In the first three stills some sand is deposited with the salt. Very little salt is found in the last two shell stills. The deposit in those stills is of sulphur composition.

There is some corrosion around the connections including the towers. These parts are easily replaced, however, and with the present method of operation maintenance costs at the Amarillo plant are probably no greater than of the average Mid-Continent plant.

In the opinion of Superintendent Rowsey the results obtained with the pipe and shell stills prove conclusively that the former is better adapted to the handling of Panhandle crude.

Fuel costs are less with a lower investment per barrel of throughput. Maintenance costs due to the presence of the sulphur and salt are also less with the pipe stills.

In this connection the pipe still previously referred to as under construction may be used in the further reduction of the fuel oil. It is believed that by using temperatures up to 850 degrees Fahrenheit with a high pressure that it will be possible to secure a cracking effect which will assure a greater recovery of overhead products and also result in lowering the cold test of the fuel oil bottoms as well as the gas oil. The pipe still is also designed so that it can handle crude oil in the same manner as the unit now in operation.

Treating of Gasoline

The present method of treating gasoline at the Amarillo plant is the result of many months of experimental work in which it was definitely determined that ordinary treating methods were not adequate. This is a problem which will confront every operator who attempts to handle the Panhandle crude.

The gasoline is first given a preliminary caustic wash. The waste sodium sulphide obtained in this wash is then mixed with litharge giving a lead sulphide which is the main treating agent. This lead sulphide is brought in contact with the gasoline through a series of mixers. The gasoline is then charged to agitators and the lead sulphide allowed to settle out with a final water wash.

No further treatment is necessary the gasoline meeting all export and domestic specifications. This method of treating takes advantage of the fact not commonly known that the precipitate formed during the sodium plumbite treatment is itself a fairly good sweetening agent. Analysis shows that this precipitate is almost pure lead sulphide.

The reaction with litharge is probably due to the fact that excess of caustic dissolves the litharge to form sodium plumbite and the lead is immediately precipitated as lead sulphide by the sodium sulphide. The equations are probably as follows:

Litharge	Caustic Soda		Sodium Plumbite
PBO.	+ 2NaOH	=	Na2PbO2 +

Water	
H20	

and

Sodium Plumbite		Sodium Sulphide		
Na2PbO2	+	Na2S	+	
		Lead Sulphide		Caustic Soda
Water				
2H20	=	PbS.	+	4NaOH

In this connection the theory has been advanced that the lead sulphide being floculent absorbs some of the sulphur compounds. It has been further suggested that the precipitate acts catalytically.

The products from the above treatment is a gasoline of 30 color or better.

Yields

With a crude averaging 36 gravity a yield of 25 per cent gasoline meeting 64-66 375 export gasoline specifications is obtained. The naphtha cut averages 4 per cent. This is an exceptionally high yield of gasoline when it is considered that in the usual crude distillation test from 28 to 29 per cent is distilled off at 410 degrees Fahrenheit. This 410 Fahrenheit when corrected for altitude means 430 Fahrenheit.

By mixing the naphtha and gasoline cuts, a gasoline of better than U. S. Motor specifications is obtained. The endpoint in fact is 410 degrees. The distillate yield is about 10 per cent with a flexible gas oil yield dependent on gravity desired.

The remaining products are all low in sulphur content. The sulphur content of the gas oil is .35 of 1 per cent and the fuel oil bottoms are one-half of 1 per cent.

This sulphur content is low enough to meet all ordinary specifications. The difficult feature, however, lies in that fact that the fuel oil has a cold test of 85 degrees Fahrenheit, which means that the product is congealed most of the time under atmospheric conditions. The company has a favorable contract with a railroad company which takes the entire output. The railroad solves the problem of handling the fuel oil by heating to the desired temperature for operation.

GEOPHYSICAL METHODS IN FINDING OF CRUDE OIL

(Continued from Page 31)

attractions of gravity is measured at different stations. There exists quite a number of arrangements which make it possible to measure such minute vertical displacements of the weight, for instance the interferometer and Whiddingtons Ultramicrometer. The main difficulty however, which prevented, so far, a practical use of these devices was the elastic hysteresis of the horizontal blade which did not allow a sufficient constancy of the neutral position especially after transportation. According to a statement of W. T. Thom a new device constructed by Dr. Wright seems to be based on a similar constructional principle.

OHIO FUEL AND COLUMBIA GAS IN CONSOLIDATION

(Continued from Page 40)

no par value and $14,805,000 of preferred stock.

Mr. Crawford, president of Ohio Fuel, is expected to be made chairman of the board of directors, and Philip G. Gossler, president of Columbia Gas & Electric, president of the new corporation. It is planned to pay quarterly dividends at the annual rate of $5 a share on the common stock, the same as on the present Columbia stock.

About 780,000 acres of the properties of the combined systems are now being operated with more than 6,950 producing gas wells, more than 10,350 miles of field and transmission pipelines and 7,300 miles of distribution pipelines supplying natural gas. The present Columbia system has extensive electric properties. The new combination will have more than 1,100,000 gas and electric customers, covering the major part of Ohio, western Pennsylvania, important sections of West Virginia and the larger cities and towns in northern and northeastern Kentucky.

Hold Fine Gas Property

The officers of the Ohio Fuel Corp. are: George W. Crawford, president; F. W. Crawford, T. B. Gregory and L. B. Denning, vice presidents; David E. Mitchell, secretary; George W. Ratcliffe, treasurer. The board of directors includes the president and vice presidents and L. A. Meyran, C. F. Niemann, C. M. Brown and H. J. Crawford of Pittsburgh; J. B. Crawford, P. C. Beers, W. W. Splane and S. Y. Ramage of Oil City, Pa.; L. E. Mallory, Bradford, Pa.; J. M. Garard, Columbus, Ohio; T. W. Phillips,, Butler, Pa., and H. McSweeney, Atlantic City, N. J. George W. Crawford is also a director of the Columbia Gas & Electric Co.

The Ohio Fuel Corp. was incorporated September 3, 1924, and acquired by exchange of shares more than 98 per cent of the capital stock of the Manufacturers Light & Heat Co. and more than 96 per cent of the capital stock of the Ohio Fuel Supply Co. and Union Natural Gas Corp. It is also heavily interested in the United Fuel Gas Co. of West Virginia, which is controlled by the Columbia Gas & Electric Co., and which is reputed to possess the finest gas properties in the United States.

The Columbia Gas & Electric Co. was organized September 11, 1906, in West Virginia, with its main office at Charleston, W. Va. The Fidelity Title & Trust Co. of Pittsburgh is its chief transfer agent. It owns, controls and operates under lease many companies, including: Union Gas & Electric Co.; Union Light, Heat & Power Co.; Cincinnati, Newport & Covington Railway Co.; Cincinnati Gas Transportation Co.; Maytown Natural Gas Co.; Virginia Gasoline & Oil Co.; The Gas & Electric Appliance Co.; Loveland Light & Water Co.; Hamilton Service Co.; Huntington Development & Gas Co.; Columbia Gas Supply Co., and Dayton Power & Light Co. The Ohio Gas & Electric Co. was merged into the Union Gas & Electric Co. and the Dayton Gas Co. into the Dayton Power & Light Co. previous to the larger merger in 1925.

The officers are: Chairman of the board and president, Philip G. Gossler; vice presidents, W. W. Freeman, H. A. Wallace, E. Reynolds, Jr.; secretary and assistant treasurer, Polk Laffoon; treasurer and assistant secretary, E. Reynolds, Jr.; directors, Lewis L. Clarke, M. H. Coggeshall, George W. Crawford, Marshall Field, W. W. Freeman, P. G. Gossler, Joseph W. Harriman, John W. Herbert, J. M. Hutton, E. W. Edwards, John G. Pew, William E. Philips, Harold Stanley, Frederick Strauss and Charles P. Taft.

CALIFORNIA GASOLINE PRICE IS WEAKENING

LOS ANGELES, Calif., July 17.—The domestic demand for motor gasoline is showing improvement, sales of gasoline through service stations being very satisfactory. Gasoline moving to the Atlantic Coast also showed some improvement during the week. Three cargoes totaling 300,000 bbls. left Los Angeles Harbor in this trade. For the first six months of this year, almost 15,000,000 bbls. of petroleum products have gone to the Atlantic Seaboard from Los Angeles Harbor. Of this amount, practically one-half was crude. Gasoline was second with slightly over 3,000,000 bbls., while fuel oil was just under the 3,000,000-bbl. mark. Diesel oil and tops made up the balance. During the past few weeks, the demand for export gasoline has not held up as well as last year at this time, the result being that the price has weakened materially, sales now being made are at from 10 to 10½ cents per gallon. Special gasoline of high quality for the European trade is still moving at as high as 11½ cents per gallon. There is no immediate outlook for any improvement in this business.

Natural gasoline, while not as strong as a month ago, is still in a firm position. A few spot sales are being made as high as 17 cents, the majority being around 16½ cents. The heavy gas production at the Ventura Field, whose gasoline content is relatively high for the enormous amount of gas being released, due of course to the high gravity oil with which it is in contact, has caused several gasoline plants to be erected in that field of late. This is the main factor responsible for the increased production of natural gasoline during the past month and a half. This, of course, has been felt to a slight degree by the local market.

The freight controversy over the reduction of rates on this commodity from the Mid-Continent is, however, the most important factor in weakening the natural gasoline demand. Until this question is definitely decided, there will not be much heavy buying by the larger companies.

Fuel and Diesel oil, while moving in good volume, are not showing any particular strength. Prices remain the same and apparently are pegged at the present levels for some time to come.

SHREVEPORT MARKET REPORTS BRISK BUYING

SHREVEPORT, La., July 17.—Brisk buying of gasoline by jobbers throughout the Shreveport territory all during the past week and the firmer tone of all other products strengthened the market and brought about a quarter of a cent increase in gasoline, the latter part of the week.

Navy moved steadily all week and a few Shreveport refiners were sold up. Refiners look forward to the next week with optimism. Grade C natural gasoline did not climb in price with Navy and moved rather sluggishly.

Buying of distillate by Chicago purchasers strengthened the market for that product. Gas oil also was stronger. Fuel oil was firm and steady. The strengthening of kerosene in Group 3 reflected in the Shreveport territory and strengthened the product.

In Arkansas gasoline moved fairly steadily. Kerosene was stronger. Distillate and gas oil was strong. The Arkansas market was featured by the many trades in fuel oil. Numerous trades in both Smackover fuel oil and refinery fuel oil were made. The biggest trade reported was the purchase by the Missouri Pacific of 100,000 bbls. of Smackover fuel oil from the Roxana.

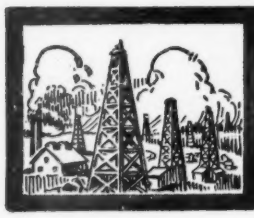
PENNSYLVANIA GRADE CRUDE

Re-election of all of the directors of the Pennsylvania Grade Crude Oil Association featured the annual meeting of the members at Wheeling, W. Va. The directors are: Clayton C. Dorn, Bradford, Pa.; I. H. Shearer, Bradford, Pa.; E. C. Breene, Oil City, Pa.; S. Messer, Oil City, Pa.; J. P. Flynn, Sistersville, W. Va.; J. L. Garard, Waynesburg, Pa.; H. D. Atlin, Mannington, W. Va.; John A. Beck, Karns City, Pa.; H. G. Eaton, Warren, Pa.; C. L. Suhr, Oil City, Pa.; J. D. Dinsmore, St. Marys, Pa.; O. C. Dunn, Marietta, Ohio; H. A. Wallace, Charleston, W. Va.; John P. Herrick, Olean, N. Y.; David B. McCalmont, Franklin, Pa.

ROBERTSON MADE PRESIDENT

PITTSBURGH, Pa., July 17.—A. W. Robertson has been elected president of the Philadelphia Co., and its affiliated corporations, to succeed A. W. Thompson, who resigned to become president of the United Gas Improvement Co. Mr. Robertson was vice president in charge of public relations and also general counsel of the company.

XUM



REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	July 20		July 13		July 6	
OKLAHOMA (Group 3)—						
50-52 450 end point	.10¾	.11	.10¾		.10¾	.10⅞
56-58 450 end point	.11	.11¼	.10½	.10⅝	.10½	.10¾
58-60 450 end point	.11⅛	.11¼	.10⅝	.10⅞	.10⅝	.10⅞
58 60 437 end point (U. S. Motor)	.11¼	.11½	.10⅞	.11	.11	
60-62 400 end point	.11¾	.12	.11⅜		.11¾	.11⅞
64-66 375 end point	.12	.12¼	.12⅛	.12¼	.12⅛	.12¼
68-70 360 end point	.12½	.12¾	.12½	.12¾	.12½	.12¾
KANSAS—						
58 60 437 end point (U. S. Motor)	.11½	.11¾	.11¼	.11½	.11⅜	.11½
NORTH TEXAS—						
48-50 450 end point (Naphtha)	.10⅝	.10¾	.10⅜	.10⅝	.10½	.10¾
50 52 450 end point (Naphtha)	.10¾	.10⅞	.10½	.10¾	.10⅝	.10¾
56 58 450 end point	.10⅞	.11	.10⅝	.10½	.10½	.10⅝
58 60 437 end point (U. S. Motor)	.11¼	.11⅜	.10⅝	.10¾	.10⅞	.11
60-62 400 end point	.11¾		.11½	.11⅝	.11⅝	.11¾
64-66 390 end point	.11¾	.11⅞	.11¾	.12	.11⅞	.12
64 66 375 end point	.12	.12⅛	.12	.12¼	.12	.12¼
68 70 360 end point	.12⅜	.12½	.12½	.12⅝	.12½	.12⅝
NORTH LOUISIANA—						
58-60 437 end point (U. S. Motor)	.11½	.11¾	.11¼	.11½	.11¼	.11½
64-66 375 end point	.12¼	.12½	.12¼	.12½	.12¼	.12½
ARKANSAS—						
58-60 437 end point (U. S. Motor)	.11½	.11¾	.11¼	.11½	.11½	
64 66 375 end point	.12¼	.12½	.12¼	.12½	.12¼	.12½
ROCKY MOUNTAIN STATES—						
*58-60 437 end point (U. S. Motor)	.14¼	.14½	.13⅞	.14	.14	.14⅛
PENNSYLVANIA—						
52 Naphtha	.12½	.12¾	.12½	.12¾	.12½	.12¾
54 Naphtha	.12¾	.13	.12¾	.13	.12¾	.13
56 Naphtha	.13	.13¼	.13	.13¼	.13	.13¼
58 Naphtha	.13¼	.13½	.13¼	.13½	.13¼	.13½
60 Gasoline	.13¾	.14	.13¾	.14	.13¾	.14
62 Gasoline	.14½	.14¾	.14½	.14¾	.14½	.14¾
64 Gasoline	.14¾	.15	.14¾	.15	.14¾	.15
66 Gasoline	.15¾	.16	.15¾	.16	.15¾	.16
68-70 Gasoline	.18¼	.18½	.18¼	.18½	.18¼	.18½
CALIFORNIA—						
54 58 437 end point (U. S. Motor) domestic	.12	.12¼	.12½	.13	.12½	.13
CHICAGO DISTRICT (Based on Group 3)—						
50 52 450 end point (Naphtha)	.10¾		.10¾		.10½	.10¾
56-58 450 end point	.10⅞	.11	.10½	.10¾	.10½	.10⅝
58-60 437 end point (U. S. Motor)	.11¼	.11½	.11		.10⅞	.11
60 62 400 end point	.12		.11¾	.12	.11¾	.12
64 66 375 end point	.12¼	.12⅜	.12	.12¼	.12	.12¼
68-70 360 end point	.12½	.12⅝	.12½	.12¾	.12½	.12¾

*Colorado points.

NATURAL GASOLINE

	July 20		July 13		July 6	
OKLAHOMA (Group 3)—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.08⅜	.08½	.08¼	.08⅜	.08¼	
Grade A, 72 79 9, 375 e.p., rec. 90%	.08⅜	.08½	.08¼	.08⅜	.08¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.08¼		.08	.08⅛	.08	.08⅛
Grade B, 76 83.9, 375 e.p., rec. 85%	.08¼		.08	.08⅛	.08	.08⅛
Grade C, 80 90, 375 e.p., rec. 78%	.08		.08		.07¾	.07⅞
NORTH TEXAS—						
Grade AA, 80 87.9, 375 e.p., rec. 90%	.08¼	.08½	.08¼		.08¼	.08¼
Grade A, 72 79.9, 375 e.p., rec. 90%	.08¼	.08½	.08¼		.08¼	
Grade BB, 84-92, 375 e.p., rec. 85%	.08¼		.08	.08⅛	.08	.08⅛
Grade B, 76-83.9, 375 e.p., rec. 85%	.08¼		.08	.08⅛	.08	.08⅛
Grade C, 80 90, 375 e.p., rec. 78%	.08		.08	.08⅛	.07¾	.07⅞
NORTH LOUISIANA—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.08⅝	.08⅞	.08½	.08¾	.08½	.08⅝
Grade B, 76 83.9, 375 e.p., rec 85%	.08⅜	.08⅝	.08⅜	.08⅝	.08¼	.08½
Grade C, 80 90, 375 e.p., rec. 78%	.08⅜	.08⅝	.08⅛	.08¼	.08	.08¼
CALIFORNIA—						
75-85, 375 390 end point	.15½	.16	.15½	.16	.15½	.16
CHICAGO DISTRICT (Based on Group 3)—						
Grade AA, 80 87 9, 375 e.p., rec. 90%	.08¼	.08½	.08¼	.08½	.08¼	
Grade A, 72-79.9, 375 e.p., rec. 90%	.08¼	.08½	.08¼	.08½	.08¼	
Grade BB, 84 92, 375 e.p., rec. 85%	.08⅛	.08¼	.08	.08¼	.08	.08⅛
Grade B, 76-83.9, 375 e p., rec. 85%	.08⅛	.08¼	.08	.08¼	.08	.08⅛
Grade C, 80 90, 375 e p., rec. 78%	.08		.07⅞	.08	.07¾	.07⅞

MOTOR NATURAL GASOLINE (BLENDS)

	July 20		July 13		July 6	
OKLAHOMA (Group 3)—						
60-62 450 end point	.10½	.10¾	.10¼	.10½	.10¼	.10¾
64 66 437 end point	.10¾	.11	.10½	.10¾	.10½	.10¾
NORTH TEXAS—						
64-66 437 end point	.10⅝	.10¾	.10½	.10⅝	.10½	.10⅝
PENNSYLVANIA—						
*60-62	.13½	.13¾	.13½	.13¾	.13½	.13¾
*64 66	.13¾	.14	.13¾	.14	.13¾	.14
*66-68	.13¾	.14	.13¾	.14	.13¾	.14
*68 70	.14	.14¼	.14	.14¼	.14	.14¼
CHICAGO DISTRICT (Based on Group 3)—						
60 62 450 end point	.10½	.10¾	.10½	.10¾	.10½	.10¾
64 66 437 end point	.10¾	.11	.10¾	.11	.10¾	.11

*At Sistersville, W. Va.

BURNING OIL

	July 20		July 13		July 6	
KANSAS—						
41-43 water white Kerosene	.07	.07¼	.06¼	.06½	.06¼	.06½
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.06¾	.07	.05¾	.06	.05¼	.05½
42 44 water white Kerosene	.07¼		.06¼	.06½	.06	.06¼
NORTH LOUISIANA—						
41-43 prime white Kerosene	.07	.07¼	.06	.06¼	.06¼	.06½
ROCKY MOUNTAIN STATES—						
*40-41 water white Kerosene	.09¾	.10	.09¼	.09½	.08¼	.08½
NORTH TEXAS—						
41-43 water white Kerosene	.06⅝	.06¾	.05¾	.06	.05¼	.05⅜
ARKANSAS—						
41 43 water white Kerosene	.07	.07¼	.06¼	.06½	.06¼	.06½
PENNSYLVANIA—						
43 Kerosene prime white	.08½	.08¾	.08½	.08¾	.08¾	.09
45 Kerosene water white	.08¾	.09	.08¾	.09	.09¼	.09½
46 Kerosene water white	.09¼	.09½	.09¼	.09½	.10¼	.10½
47 Kerosene water white	.10	.10¼	.10	.10¼	.10¾	.11
34 Neutral	.07½	.07¾	.07¼	.07½	.07¼	.07½
34 Sundebloom Neutral	.08½	.08¾	.08½	.08¾	.08½	.08¾
36 Miners' Neutral	.06¾	.07	.06¾	.07	.06¾	.07
300 Mineral Seal	.07¼	.08	.07¼	.07½	.07¼	.07½
CALIFORNIA—						
38-40 water white (high burning test)	.07½	.08½	.07¼	.08½	.07¼	.08½
Engine distillate, 43-45 445 end point	.09¾	.10	.10¼	.10½	.10¼	.10½
Engine distillate, 42-44 480 end point	.09¼	.09½	.10	.10¼	.10	.10¼
CHICAGO DISTRICT (Based on Group 3)—						
41 43 water white Kerosene	.06¾		.05¾	.06	.05¼	.05½
42-44 water white Kerosene	.07	.07¼	.06¼	.06½	.06	.06¼

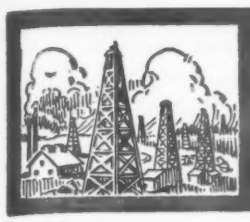
*Colorado points.

FUEL OILS

	July 20		July 13		July 6	
KANSAS—						
24-26 Fuel Oil	1.35	1.40	1.30	1 35	1.35	1.40
32 36 Gas Oil	.04½	.04¾	.04½	.04¾	.04½	.04¾
38-40 Distillate	.04¾		.04⅝	.04¾	.04⅝	.04¾
OKLAHOMA (Group 3)—						
Below 22 Fuel Oil (sellers' cars)	1.20		1.15		1.15	1.17½
22-26 Fuel Oil (sellers' cars)	1 22½	1.25	1.17½	1.20	1.17½	1.20
24-26 Fuel Oil (sellers' cars)	1.25		1.20		1.20	
26-30 Fuel Oil (sellers' cars)	1.30	1.35	1.22½	1.25	1.22½	1.25
28 30 Fuel Oil (sellers' cars)	1.35	1.40	1.30	1.35	1.25	1.27½
32-36 Gas Oil (cracking stock)	.04¼	.04½	.04	.04⅛	.03¾	.04
36 38 Distillate	.04½	.04⅝	.04⅜	.04½	.04¼	.04⅜
38-40 Straw Distillate	.04⅝	.04¾	.04½		.04⅜	.04½
NORTH TEXAS—						
24-26 Fuel Oil (sellers' cars)	1.30	1.35	1.30	1.35	1 20	1.22½
32-36 Gas Oil (straw)	.04⅛	.04¼	.04⅛	.04¼	.03¾	.04
38-40 Straw Distillate	.04½	.04⅝	.04⅜	.04½	.04¼	.04½
NORTH LOUISIANA—						
18 20 Fuel Oil	1.35	1.40	1.35	1 40	1.35	1.40
32-36 Gas Oil	.04¼	.04½	.04¼	.04½	.04¼	.04⅜
36-38 Distillate	.04½	.04¾	.04½	.04¾	.04⅜	.04½
ARKANSAS—						
38-40 Distillate	.04¼	.04½	.04½	.04¾	.04½	.04¾
32 36 Gas Oil	.04¼	.04½	.04¼	.04½	.04¼	.04½
16 20 Refinery Fuel Oil	1.22½	1.25	1.25	1.30	1.20	1.25
GULF COAST (South Texas)—						
Gas Oil	.05½	.05¾	.05½	.05¾	.05½	.05¾
Fuel Oil	1.75	1.85	1.75	1.85	1.75	1.85
PENNSYLVANIA—						
30-34 Fuel Oil	.05¾	.05⅞	.05¾	.05⅞	.05½	.05¾
36-40 Fuel Oil	.06¼	.06½	.06¼	.06½	.06¼	.06½
CALIFORNIA—						
33 36 Distillate	.04	.04¾	.04¾	.05	.04¾	.05
27 32 Distillate	.03½	.04	.04	.04½	.04	.04½
15-20 Fuel Oil (at tide water)	1.00	1 04	1.00	1.04	1.00	1.04
27 plus Diesel	1.15	1.19	1.15	1.19	1.15	1.19
CHICAGO DISTRICT (Based on Group 3)—						
24-26 Fuel Oil (sellers' cars) Group 3	1.20	1.25	1.20	1.25	1.20	1.25
22 26 Fuel Oil (sellers' cars)	1.20	1.22½	1.17½	1.20	1.20	1 22½
18-22 (El Dorado)	1.17½	1.20	1.15	1.17½	1.17½	1.20
18-20 (Smackover)	1.20		1.20		1.20	
32-36 Gas Oil	.04⅛	.04⅜	.04	.04⅛	.04	.04⅛
36-38 Distillate	.04¼	.04⅜	.04¼	.04⅜	.04½	.04⅝
38 46 Straw Distillate	.04½	.04¾	.04½	.04⅝	.04¼	.04⅜

LUBRICATING OILS AND WAX

	July 20		July 13		July 6	
OKLAHOMA (Group 3)—						
70-80 vis., 2½ color, 20-25 cold test	.06	.07	.06	.07	.06	.07
100 vis., 3 color, 20-25 cold test	.06½	.07	.06½	.07	.06½	.07
100 vis., 2 color, 20 25 cold test	.07	.07½	.07	.07½	.07	.07½
150 vis., 4 color, 20 25 cold test	.09¾		.09¾		.09¼	.09¾
150 vis., 3 color, 20-25 cold test	.09½	.10	.09½	.10	.09½	.10
180 vis., 4 color, 23 28 cold test	.10	.10½	.10	.10½	.10	.10½
180 vis., 3 color, 23-28 cold test	.10½	.11½	.10½	.11½	.10¼	.10½
200 vis., 4 color, 23-28 cold test	.11¼	.11½	.11¼	.11½	.11	.11½
200 vis., 3 color, 23-28 cold test	.11¼	.12¼	.11¼	.12¼	.11¼	.11½
220 vis., 4 color, 25-30 cold test	.13		.13		.14	.14½
220 vis., 3 color, 25 30 cold test	.13½	.14	.13½	.14	.14½	.15
240 vis., 4 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
240 vis., 3 color, 25-30 cold test	.14½	.15	.14½	.15	.14¼	.15
280 vis., 4 color, 25-30 cold test	.15½	.16½	.15½	.16½	.15½	.16
280 vis., 3 color, 25 30 cold test	.16½	.17	.16½	.17	.16½	.17
180 vis., 5 color, 23-28 cold test	.09¾	.10¼	.09¾	.10¼	.09¾	.10¼
200 vis., 5 color, 23-28 cold test	.10¾	.11¼	.10¾	.11¼	.10¾	.11¼
220 vis., 5 color, 25 30 cold test	.12	.12¾	.12	.12¾	.12	.12¾
240 vis., 5 color, 25-30 cold test	.13	.14	.13	.14	.13	.14
280 vis., 5 color, 25-30 cold test	.15	.16	.15	.16	.15½	.16
Cylinder Stocks:						
180-200 vis., S. R. green, 40-45 cold test	.08¼	.11	.08¼	.11	.08½	.11
190 200 vis., S. R. green, 40-45 cold test	.08	.08½	.08	.08½	.08	.08½
170-190 dark green, 40-45 cold test	.06	.06½	.06	.06½	.06	.06½
190-200 vis. @ 210 "D" Bright Stock	.33	.35	.33	.35	.33	.35
200-210 vis. @ 210 "E" Bright Stock	.30	.31	.30	.31	.30	.31
150 vis. @ 210 "E" Bright Stock	.27	.28	.27	.28	.27	.28
150 vis. @ 210 "D" Bright Stock	.28	.31	.28	.31	.28	.31
Waxes:						
122-124 White Crude Scale Wax	.04¾		.04¾	.04⅞	.04¾	.04⅞
PENNSYLVANIA—						
150, 3 color	.24		.24		.24½	
180, 3 color	.27½		.27½		.28	
200, 3 color	.29		.29		.29½	
220, 3 color	.31		.31		.32	
600, steam refined	.13½		.14		.14¼	
635, steam refined	.17		.18		.18	
650, steam refined	.18		.19		.19¼	
600, Pennsylvania flash	.25½		.25½		.25½	
630, Pennsylvania flash	.32½		.32½		.32½	
*550, E filtered	.19		.19		.19	
600, E filtered	.19½		.19½		.19½	
*600, E filtered	.20½		.20½		.20½	



REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

600, D filtered	.26½		.26½		.26½	
550, E filtered	.18		.18		.18	
550, D filtered	.22		.22		.22	
Pennsylvania Bright Stock	.41		.41		.41	
122-124 White Crude Scale Wax	.05¼	.05⅜	.05¼	.05⅜	.05¼	.05⅜
†124-126 White Crude Scale Wax	.05⅜	.05½	.05⅜	.05½	.05⅜	.05½

*At Warren, Pa. †At New York City.

GULF COAST (South Texas)—						
Zero Black	.06	.07	.06	.07	.06	.07
No. 2 color, 100 vis., pale oil	.07½	.08	.07½	.08	.07½	.08
No. 3 color, 200 vis., pale oil	.11½	.12	.11½	.12	.11½	.12
No. 3½ color, 300 vis., pale oil	.12½	.13½	.12½	.13½	.12½	.13½
No. 3¾ color, 500 vis., pale oil	.14½	.15	.14½	.15	.14½	.15½
No. 4 color, 750 vis., pale oil	.18½	.19	.18½	.19	.18½	.19½
No. 2 plus color, 200 vis, pale filtered	.21½		.21½		.21½	
No. 2 color, 300 vis., pale filtered	.24½		.24½		.24½	
No. 2½ color, 500 vis., pale filtered	.27½		.27½		.27½	
No. 2½ color, 750 vis., pale filtered	.35½		.35½		.35½	
No. 5 to 6 color, 200 vis., red oil	.09½	.10	.09½	.10	.09½	.10
No. 5 to 6 color, 300 vis., red oil	.11½	.13	.11½	.13	.11½	.13
No. 5 to 6 color, 500 vis., red oil	.12½	.13	.12½	.13	.12½	.13½
No. 5 to 6 color, 750 vis., red oil	.16½	.17½	.16½	.17½	.16¼	.17½
CALIFORNIA—						
130 vis., 2½-3 color	.10	.11½	.10	.11½	.10	.11½
200 vis., 2½-3 color	.13½	.14½	.13½	.14½	.13½	.14½
300 vis., 3 -3½ color	.15	.16	.15	.16	.15	.16
350 vis., 3½-4 color	.16½	.17½	.16½	.17½	.16½	.17½
400 vis., 3½ 4 color	.18	.19	.18	.19	.18	.19
Red Neutrals:						
200 vis., 4½-5 color	.12	.13	.12	.13	.12	.13
300 vis., 5 -6 color	.13	.14	.13	.14	.13	.14
400 vis., 5 6 color	.15	.16	.15	.16	.15	.16
500 vis., 4½-5 color	.18	.19	.18	.19	.18	.19
500 vis., 6 -6½ color	.16	.17	.16	.17	.16	.17
600 vis., 6½ plus color	.17	.18	.17	.18	.17	.18

Note: Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

Gasoline:	July 20	July 13	July 6
U. S. Motor, 58 60 437	.15	.15	.15
Export, 64-66 375	.17	.17	.17
Kerosene, prime white, 41-43	.09⅛	.09⅛	.09⅛
*Bunker Oil, 14-16, per bbl.	1.75	1.75	1.75
*Diesel Oil, 28-30, per bbl.	2.50	2.50	2.50
Gas Oil, 28 plus	.06¾	.06¾	.06¾
Cylinder Oil, light filtered, 600 s.r.	.29	.29	.29
Bright Stock, No. 5, 150 vis., at 212 F.	.41	.41	.41
White Neutral, No. 1, 170 vis., 1 color	.37	.37	.37
Pale Oil, "25," 170 vis., 3½ color	.13	.13	.13
Pale Oil, "28," 100 vis., 2 color	.08	.08	.08
Red Oil:			
No. 3, 160 vis., 7 color	.11	.11	.11
No. 2, 212 vis., 5½ color	.12	.12	.12
No. 1, 265 vis., 5½ color	.13½	.13½	.13½
Polar, 295 vis., 6 color	.14	.14	.14
Paraffin Wax, refined:			
120-122 a.m.p., per lb.	.06	.06	.06
125-127 a.m.p., per lb.	.06⅛	.06⅛	.06⅛
130-132 a.m.p., per lb.	.06½	.06½	.06½
135-137 a.m.p., per lb.	.07	.07	.07
Petrolatum, in bbls., per lb.:			
Amber	.03⅛	.03⅛	.03⅛
Light amber	.03½	.03½	.03½
Cream	.05½	.05½	.05½
Lily white	.07¾	.07¾	.07¾
Snow white	.08¾	.08¾	.08¾

*Lighterage 5.5c a barrel extra.

NEW YORK CASE EXPORT PRICES

	July 20	July 13	July 6
Gasoline, U. S. Motor, 58 60	.28.90	.28.90	.29.40
Kerosene:			
Standard white Kerosene	.18.90	.18.90	.19.40
Water white kerosene	.20.15	.20.15	.20.40

LOS ANGELES EXPORT PRICES

	July 20	July 13	July 6
Kerosene water white	.05½ .06½	.05½ .06½	.05½ .06½
U. S. Motor Gasoline, 54-56 437 e.p.	.10 .10½	.10¾ .11	.10¾ .11

CRUDE OIL PRICES

OKLAHOMA, KANSAS AND NORTH TEXAS

***Prairie Oil & Gas Co.**
(Oklahoma, Kansas and North and East Central Texas)
(Effective May 15)

28° to 28.9°	$1.65
29° to 29.9°	1.73
30° to 30.9°	1.81
31° to 31.9°	1.89
32° to 32.9°	1.97
33° to 33.9°	2.05
34° to 34.9°	2.13
35° to 35.9°	2.21
36° to 36.9°	2.29
37° to 37.9°	2.37
38° to 38.9°	2.45
39° to 39.9°	2.53
40° to 40.9°	2.61
41° to 41.9°	2.69
42° to 42.9°	2.77
43° to 43.9°	2.85
44° to 44.9°	2.93
45° to 45.9°	3.01
46° to 46.9°	3.09
47° to 47.9°	3.17
48° to 48.9°	3.25
49° to 49.9°	3.33
50° to 50.9°	3.41
51° to 51.9°	3.49
52° and above	3.57

*Other major purchasers except as noted below.

Champlin Refining Co.
(Garber and Tonkawa)
(Effective May 15)

Schedule based on Prairie Oil & Gas Co. paying 10 cents additional for each grade of crude above 38° gravity.

Humble Oil & Refining Co.
(Effective May 15)
(North and East Central Texas, Ranger, Mexia, Powell, Richland, Wortham, Currie, Moran, Big Lake, Nacona and Lytton Springs)

Same prices as Prairie Oil & Gas Co. schedule. Postings below 28° gravity 8 cents less for each degree, effective June 21.

Magnolia Petroleum Co.
(Effective May 15)
(Oklahoma, Kansas and North and East Central Texas, except Corsicana heavy, and Lytton Springs of South Central Texas)

Below 28°	$1.30
Other grades same as Prairie Oil & Gas Co.	
Iatan	$1.15
Corsicana heavy	1.25
Panola County:	
30° to 34.9°	$1.95
35° to 37.9°	2.10
38° and above	2.25

Texhoma Oil & Refining Co.
(Wichita Falls, Tex., District)
(Effective May 16)

Below 32°	$1.94
32° to 32.9°	2.02
33° to 33.9°	2.10
34° to 34.9°	2.18
35° to 35.9°	2.26
36° to 36.9°	2.34
37° to 37.9°	2.42
38° to 38.9°	2.50
39° to 39.9°	2.60
40° to 40.9°	2.66
41° to 41.9°	2.74
42° to 42.9°	2.82
43° to 43.9°	2.90
44° and above	2.98

TEXAS PANHANDLE

Kay County Gas Co.
Magnolia Petroleum Co.
(Effective May 15)

28° to 28.9°	$1.35
29° to 29.9°	1.40
30° to 30.9°	1.45
31° to 31.9°	1.50
32° to 32.9°	1.55
33° to 33.9°	1.60
34° to 34.9°	1.65
35° to 35.9°	1.70
36° to 36.9°	1.75
37° to 37.9°	1.80
38° to 38.9°	1.85
39° and above	1.90

Humble Oil & Refining Co.
(Effective June 21)

39° to 39.9°	$1.90
40° to 40.9°	1.95
41° to 41.9°	2.00
42° to 42.9°	2.05
43° to 43.9°	2.10
44° and above	2.15

Grades below 39° gravity same as posted by Magnolia Petroleum Co. and Kay County Gas Co.

GULF COAST

***Humble Oil & Refining Co.**
(Effective May 15)

Grade A	$1.60
Grade B—	
Below 25°	1.50
25° to 25.9°	1.55
26° to 26.9°	1.60
27° to 27.9°	1.65
28° to 28.9°	1.70
29° to 29.9°	1.75
30° to 30.9°	1.80
31° to 31.9°	1.85
32° to 32.9°	1.90
33° to 33.9°	1.95
34° to 34.9°	2.00
35° and above	2.05
Boling (December 26)	1.50
High Island (Sun Oil Co.) (Apr. 30)	1.40

The Texas Company
(Effective June 8)

Grade A	$1.60
Grade B	1.50
†Light crude—	
35° to 35.9°	2.05
36° to 36.9°	2.10
37° to 37.9°	2.15
38° to 38.9°	2.20
39° to 39.9°	2.25
40° and above	2.30

*The Sun Pipe Line Co.'s postings same as Humble Oil & Refining Co.'s.
†The Texas Company's postings on light crude under 35° gravity are same as Humble Oil & Refining Co.'s grades and prices for Grade B crude.

SOUTH CENTRAL AND SOUTHWEST TEXAS

***Magnolia Petroleum Co.**

Luling (contract) (Eff. May 18)	$1.30
Mirando (Webb, Jim Hogg and Zapata Counties) (May 15)	1.25
Rockdale-Minerva (Milam County)	1.25
Thrall	1.00
Calliham (Live Oak and McMullen Counties) (May 15)	1.75
§Lockhart (Lytton Springs)	
Somerset (Grayburg Pipe Line Co.): (Effective May 17)	
28° to 28.9°	1.25
29° to 29.9°	1.35
30° to 30.9°	1.71
31° to 31.9°	1.89
32° to 32.9°	1.97
33° to 33.9°	2.05
34° to 34.9°	2.13
35° to 35.9°	2.20
36° to 36.9°	2.29
37° to 37.9°	2.37
38° and above	2.45

*Texpata Pipe Line Co. and Humble Pipe Line Co. also post in Mirando Field paying same prices as Magnolia Petroleum Co.
§Lockhart prices same as for North and East Central Texas. Lockhart posted by Magnolia Petroleum Co. and Humble Oil & Refining Co.

ARKANSAS AND NORTH LOUISIANA

Standard Oil Co. of Louisiana
(Effective May 18)

Caddo below 32°	$2.10
32° to 34.9°	2.25
35° to 37.9°	2.35
38° and above	2.45
Homer below 31°	1.85
31° to 32.9°	2.00
33° to 34.9°	2.10
35° and above	2.20
Haynesville below 33°	2.00
33° and above	2.10
El Dorado below 33°	2.00
33° to 34.9°	2.10
35° to 36.9°	2.20
37° and above	2.30
Bull Bayou, 32° to 34.9°	1.95
35° to 37.9°	2.10
38° and above	2.25
Cotton Valley	1.20
DeSoto	2.30
Crichton	2.10
Bellevue	1.50
Smackover, below 24°	1.10
24° to 24.9°	1.35
25° to 25.9°	1.40
26° to 26.9°	1.45
27° and above	1.50
*Stephens, Ark., below 26°	1.45
26° and above	1.65
†Calion (East El Dorado) (Feb. 1)	.95
§Urania (May 26)	1.25

The Texas Company

Caddo:	
Below 26°	$1.40
26° to 28.9°	1.55
29° to 31.9°	1.70
32° to 34.9°	2.25

Other grades same as Standard Oil Co. of Indiana.

Other companies posting in these fields are: Gulf Pipe Line Co.; Atlantic Oil Producing Co. in Homer, Haynesville, El Dorado and Smackover; The Texas Company in Caddo, Bull Bayou, DeSoto, Crichton and Smackover.

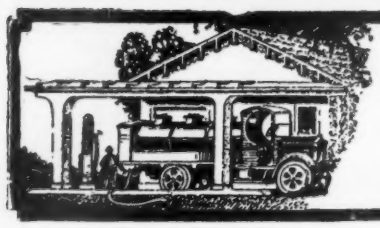
*Posted by the Atlantic Oil Producing Co. †Posted by the Gulf Pipe Line Co. §Posted by the Louisiana Oil Refining Corp.

ROCKY MOUNTAIN STATES

Ohio Oil Co.—Midwest Refining Co.
(Effective May 17)

Rock Creek (Wyo.)	$2.25
Salt Creek—	
29° to 29.9°	1.73
30° to 30.9°	1.81
31° to 31.9°	1.89
32° to 32.9°	1.97
33° to 33.9°	2.05
34° to 34.9°	2.13
35° to 35.9°	2.21
36° to 36.9°	2.29
37° and above	2.37

(Continued on Page 148)



TANK WAGON MARKETS

Tankwagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns, July 20.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)
Main Service Station Price

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
†Less than 100 gals.	19.0	21.0	...	13.5

Tank wagon prices on April 19, 1922; g. up 1½c; May 8, up 1c; June 27, g. and k. up 1c; July 19, g. down 2c, k. down 1c; Oct. 10, g. down 2c; Oct. 21, g. down 1c; Feb. 5, 1923, g. up 1c; Feb. 20, g. up 1c; Aug. 14, g. down 6.6c; Oct. 4, k. down 1½c; Nov. 10, g. down 1.4c; Dec. 20, g. up 2c; Jan. 12, 1924, g. up 2c; k. up 1c; Feb. 5, g. up 2c, k. 1c; July 18, g. down 1c; July 30, g. and k. down 1c; Sept. 12, g. down 2c; Jan. 23, 1925, g. up 1c; Jan. 26, g. up 1c; Jan. 31, g. up 1c; Feb. 12, g. up 2c, k. up 1c; April 19, g. down 1c; July 14, g. up 1c; Aug. 25, g. down 2c, k. down 1c; Sept. 1 g. down 1c; Feb. 4, 1926, g. up 1c; k. up 1c; April 16, 1926, k. up 1c; April 24, 1926, k. up ½c; April 29, 1926, g. up 1c, k. up ½c; May 6, 1926, k. up ½c May 17, g. and k. up 1c July 1, k. down 1c; July 3, k. down 1c.

Decatur, Ill.	19.2	21.2	...	14.0
E. St. Louis	18.1	20.35	...	13.1
Joliet	19.4	21.4	...	14.2
Peoria	19.2	21.2	...	14.0
Quincy	19.2	21.2	...	13.8
Davenport, Ia.	21.5	23.5	2.0	14.4
Des Moines	21.5	23.5	2.0	14.4
Keokuk	21.5	23.5	2.0	14.4
Sioux City	21.0	23.0	2.0	14.0
Duluth, Minn.	22.5	24.5	2.0	15.1
Minneapolis	22.2	24.2	2.0	15.1
La Cross, Wis.	22.2	24.2	2.0	14.9
Milwaukee	21.1	23.1	2.0	14.8
Madison	21.3	23.3	2.0	14.0
Detroit, Mich.	21.8	23.8	2.0	14.7
Grand Rapids	21.7	23.7	2.0	14.6
Saginaw	21.9	23.9	2.0	15.8
Evansville, Ind.	22.0	24.0	3.0	14.0
Ft. Wayne	22.4	24.4	3.0	14.4
Indianapolis	22.2	24.2	3.0	14.2
South Bend	22.4	24.4	3.0	14.4
Fargo, N. D.	22.9	24.9	1.0	17.1
Huron, S. D.	23.5	25.5	3.0	15.6
Sioux Falls	22.0	24.0	3.0	15.1
*K. C., Mo.	21.9	23.9	3.0	12.8
*Springfield	21.8	23.8	3.0	12.7
*St. Louis	20.6	22.9	2.5	13.5
*St. Joseph	21.0	23.0	2.5	13.4
‡Wichita, Kan.	19.8	21.8	2.0	13.8
Bartlesville, Ok.	20.8	22.8	3.0	13.3

*State tax is 2c. Remainder is city tax.
†Quantity price on more than 100 gallons, 18.0.
‡At all Kansas points a discount of 1 cent a gallon is allowed from the tank wagon postings on dumps of 50 gallons or more.

The following monthly rebate system is effective on tankwagon schedules throughout the territory of Standard Oil Co. of Indiana: Over 750 gallons, ½c; over 2,000 gallons, ¾c; over 3,000 gallons 1c; over 6,000 gallons, 1½c; over 10,000 gallons, 2c. If quantity bought during the year is equal to 12 times the monthly agreed purchases the discount will be paid or credited on the entire quantity less monthly payments. Service station customers will receive discount of 1 cent a gallon on purchases amounting to 200 gallons a month or 2,400 gallons a year; and 2 cents a gallon on 600 gallons a month or 7,200 gallons a year.

SOUTHWESTERN DISTRICT
***Magnolia Petroleum Co.**

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Dallas, Tex.	†21.0	21.0	1.0	14.0
Fort Worth	†21.0	21.0	1.0	14.0
Houston	†21.0	21.0	1.0	14.0
San Antonio	†21.0	21.0	1.0	14.0
El Paso	†22.0	22.0	1.0	15.0
Texarkana	†20.0	20.0	1.0	14.0
Muskogee, Ok.	19.0	22.0	3.0	12.0
Okla. City	17.0	20.0	3.0	12.0
Tulsa	19.0	22.0	3.0	12.0
Little Rock	21.0	24.0	4.0	15.5
Ft. Smith, Ark.	21.0	24.0	4.0	15.5

*The following is the schedule of discounts on quantity gasoline sales adopted by the Magnolia Petroleum Co. in Oklahoma: Over 750 gallons a month, ½c; over 2,000 gallons, ¾c; over 3,000 gallons 1c; over 4,500 gallons, 1¼c; over 6,000 gallons, 1½c; over 8,000 gallons, 1¾c; over 10,000 gallons, 2c. If the quantity bought during the year is 12 times the monthly agreed purchases, the discount will be paid or credited on the entire quantity for the year less any monthly purchases.

The schedule on service station deliveries is: Over 200 gallons a month, 1c; over 300 gallons a month, 1¼c; over 400 gallons, 1½c; over 500 gallons, 1¾c; over 600 gallons, 2c. The same rule applies for annual purchases as in the tankwagon discounts.

†Magnolia maintains only a retail schedule in Texas with dealers and large consumers allowed a flat 3-cent discount.

STANDARD FURNACE OIL
(Standard Oil Co. of Indiana)

1 to 149 gallons	11.0
50 to 399 gallons	10.0
400 to 849 gallons	9.5
850 or more gallons	9.0

CENTRAL SOUTH DISTRICT
Standard Oil Co. (Louisiana)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
*New Orleans	20.5	23.5	3.0	15.0
Alexandria	20.0	23.0	3.0	16.5
Baton Rouge	19.0	22.0	3.0	14.5
LaFayette	20.0	23.0	3.0	15.5
Lake Charles	20.5	23.5	3.0	16.0
Shreveport, La.	19.0	22.0	3.0	15.0
Memphis, Tenn.	21.5	24.5	3.0	17.0
Chattanooga	23.5	26.5	3.0	17.5
Knoxville	23.5	26.5	3.0	18.0
Nashville	22.5	25.5	3.0	18.0
Bristol	24.0	27.0	3.0	17.5
Little Rock Ark	22.0	25.0	4.0	16.0

*Tax of 3c includes city tax of 1c.

SOUTHERN DISTRICT
Standard Oil Co. (Kentucky)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Atlanta, Ga.	25.0	28.0	3.5	19.0
Augusta	25.0	28.0	3.5	19.0
Macon	25.0	28.0	3.5	19.0
Savannah	23.0	26.0	3.5	17.0
Birm'ghm, Ala.	22.0	25.0	3.0	18.5
Mobile	21.0	24.0	3.0	17.0
Montgomery	23.0	26.0	3.0	19.5
Clarksdale, Miss	23.0	26.0	4.0	16.5
Jackson	22.0	26.0	4.0	16.5
Natchez	22.5	25.5	4.0	16.0
Vicksburg	22.5	25.5	4.0	16.0
Jack'ville, Fla.	23.0	26.0	4.0	17.0
Miami	25.0	28.0	4.0	18.5
Pensacola	23.0	26.0	4.0	17.5
Tampa	23.0	26.0	4.0	17.0
Covington	24.0	27.0	5.0	18.0
Louisville	25.0	28.0	5.0	17.0
Lexington, Ky.	25.0	28.0	5.0	18.0

In addition to the state tax of 2c on gasoline, Montgomery has city tax of 1c on gasoline and ½c on kerosene. Prices in Georgia include ½c inspection fee on gasoline and kerosene; in Florida, an inspection feet of 0.125c; in Alabama, an inspection feet of ½c on kerosene only.

ROCKY MOUNTAIN DISTRICT
Continental Oil Co.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Denver, Colo.	22.0	22.0	2.0	17.0
Pueblo	22.0	24.0	2.0	17.0
Casper, Wyo.	22.5	24.5	2.5	16.5
Cheyenne	23.5	25.5	2.5	17.0
Butte, Mont.	24.0	24.0	2.0	19.5
Helena	26.0	28.0	2.0	19.5
Salt Lake, Utah	26.0	28.0	3.5	18.5
Boise, Idaho	27.0	29.0	3.0	20.5
Albuquerque, N. Mex.	28.5	28.5	3.0	19.0

ATLANTIC COAST DISTRICT
Standard Oil Co. (New Jersey)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Atlantic City	19.0	....	...	16.0
Newark, N. J.	19.0	21.0	...	16.0
Annapolis, Md.	21.0	....	2.0	16.0
Baltimore	21.0	24.0	3.0	16.0
Cumberland	21.0	24.0	2.0	16.0
Washington	21.0	24.0	2.0	16.0
Danville, Va.	23.5	....	4.5	16.0
Norfolk	23.5	26.5	4.5	16.0
Petersburg	23.5	26.5	4.5	16.0
Roanoke	23.5	26.5	4.5	16.0
Richmond	23.5	26.5	4.5	16.0
Charleston, W. Va.	22.5	25.5	3.5	16.0
Keyser	22.5	....	3.5	16.0
Parkersburg	22.5	22.5	3.5	16.0
Wheeling	22.5	25.5	3.5	16.0
Charlotte, N. C.	23.5	26.5	4.0	16.0
Hickory	23.5	....	4.0	16.0
Mt. Airy	23.5	26.5	4.0	16.0
Salisbury	23.5	26.5	4.0	16.0
Charleston, S.C.	24.5	27.5	5.0	16.0
Columbia	24.5	27.5	5.0	16.0

NEW YORK AND PART OF NEW ENGLAND DISTRICT
Standard Oil Co. (New York)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Albany, N. Y	21.0	....	...	17.0
*New York	21.0	....	...	17.0
Buffalo	20.0	....	...	17.0
Rochester	21.0	....	...	15.0
Syracuse	21.0	....	...	17.0
Boston, Mass.	21.0	....	...	17.0
Augusta, Me.	24.0	....	3.0	17.0
Manchester, N. H.	23.0	....	3.0	17.0
Burlington, Vt.	23.0	....	3.0	17.0

*Price in steel barrels.
Note: Standard Oil Co. of New York does not generally quote service station price in its territory. In most cases the service station price is 2 or 3 cents higher than tankwagon price.

PACIFIC COAST DISTRICT
Standard Oil Co. (California)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
San Francisco	18.0	22.0	3.0	15.5
Los Angeles	16.5	20.5	2.0	15.5
Fresno	18.5	22.5	2.0	17.5
Reno, Nev.	23.5	27.5	4.0	19.0
Portland, Ore.	19.0	23.0	3.0	16.5
Seattle, Wash.	18.0	22.0	2.0	16.5
Spokane	22.0	26.0	2.0	20.5
Tacoma	18.0	22.0	2.0	16.5
Phoenix, Ariz.	26.0	28.0	3.0	21.5

CALIFORNIA CRUDE PRICES
***Standard Oil Co.-Union Oil Co.**
(Effective March 11)

Gravity—	Long Beach Huntington Beach Richfield Olinda Brea-Olinda Rosecrans-Dom'gues Torrance-Inglewood	Whittier La Habra Montebello	Kern River Newhall-McKittrick Midway-Sunset Elk Hills Lost Hills Beiridge	Coyote	Santa Fe Springs	Coalinga	Wheeler Ridge	Santa Maria Ventura Salt Lake
14°	.85	.85	.75	.85	....	.75	.75	.85
15°	.87	.85	.75	.85	....	.75	.75	.85
16°	.90	.85	.75	.85	....	.75	.75	.85
17°	.94	.85	.75	.85	....	.75	.75	.85
18°	.98	.86	.75	.86	....	.75	.75	.85
19°	1.04	.87	.75	.87	....	.75	.75	.85
20°	1.10	.89	.82	.90	.89	.79	.78	.90
21°	1.16	.91	.90	.98	.91	.86	.81	.97
22°	1.22	.94	1.00	1.06	.94	.93	.85	1.04
23°	1.28	.97	1.11	1.14	.97	1.00	.89	1.11
24°	1.34	1.01	1.22	1.22	1.02	1.07	.98	1.18
25°	1.40	1.05	1.33	1.30	1.08	1.14	.97	1.26
26°	1.46	1.09	1.44	1.38	1.16	1.21	1.01	1.32
27°	1.52	1.13	1.55	1.46	1.24	1.28	1.05	1.39
28°	1.58	1.17	1.66	1.54	1.32	1.35	....	1.46
29°	1.64	1.21	1.77	1.62	1.40	1.43	....	1.53
30°	1.70	1.25	1.88	1.70	1.48	1.49	....	1.60
31°	1.76	....	1.99	....	1.60	1.56	....	1.67
32°	1.84	....	2.10	....	1.72	1.63	....	1.72
33°	1.92	....	2.21	....	1.84	1.70	....	1.79
34°	2.00	....	2.32	....	1.96	1.77	....	1.85
35°	2.08	....	....	....	2.08	1.84	....	1.92
36°	2.16	....	....	....	2.16	....	....	....
37°	2.24	....	....	....	2.24	....	....	....
38°	2.34	....	....	....	2.34	....	....	....
39°	2.44	....	....	....	2.44	....	....	....
40°	2.54	....	....	....	....	....	....	....
41°	2.64	....	....	....	....	....	....	....
42°	2.74	....	....	....	....	....	....	....

*Column 2—Long Beach and Huntington Beach crudes, 14 to 32 degrees, inclusive; Richfield and Brea-Olinda, 14 to 30 degrees; Torrance and Inglewood, 14 to 28; Domingues, 24 to 42 degrees. Rosecrans crude ranges from 14 to 42 degrees, but only Union Oil Co. posts below 24 degrees.
Column 3—Whittier and La Habra crudes, 14 to 22 degrees; Montebello, 14 to 30 degrees.
Column 4—Kern River, Newhall and McKittrick, 14 to 19 degrees; Midway-Sunset and Elk Hills, 14 to 33 degrees; Lost Hills and Beiridge, 14 to 34 degrees.
Column 6—Santa Fe Springs. Only Union Oil Co. posts below 24 degrees.
Column 9—Salt Lake, 14 to 19 degrees, inclusive; Santa Maria, 14 to 30 degrees; Ventura, 14 to 35 degrees. Posted only by Union Oil Co.

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND
Atlantic Refining Co.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
*Pittsburgh, Pa.	20.0	25.0	...	17.0
*Philadelphia	20.0	25.0	...	17.0
*Scranton	20.0	25.0	...	17.0
*Allentown	20.0	25.0	...	17.0
Altoona	20.0	25.0	...	17.0
*Erie	20.0	25.0	...	17.0
Dover, Del.	22.0	25.0	2.0	17.0
Wilmington	22.0	25.0	2.0	17.0
Springf'd, Mass.	21.0	23.0	...	17.0
Worcester	21.0	24.0	...	17.0
Boston	21.0	24.0	...	17.0
Providence, R.I.	22.0	24.0	1.0	17.0
Hartford, Conn.	23.0	26.0	2.0	16.0
New Haven	23.0	26.0	2.0	17.0

*Pennsylvania tax of 2c is collected by the dealer and paid by him direct to the State.

NEBRASKA
Standard Oil Co. (Nebraska)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Omaha	21.25	23.25	2.0	14.0
McCook	22.75	24.75	2.0	15.5
Norfolk	21.75	23.75	2.0	14.5
N. Platte	22.75	24.75	2.0	15.25
Scottsbluff	23.25	24.25	2.0	14.75

OHIO
Standard Oil Co. (Ohio)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
All Ohio points	22.0	24.0	2.0	17.0

TANKWAGON PRICE CHANGES

July 17.—Continental Oil Co. reduced tankwagon prices of gasoline in New Mexico 1 cent with few exceptions.

The following gasoline tankwagon changes were not mentioned in The Oil and Gas Journal although changes were made previous to this issue:

Tennessee points advanced by Standard Oil Co. of Louisiana a half cent on May 18 and 1 cent on June 4.

Oklahoma points reduced 1 cent June 16 except at Oklahoma City where prices were cut 4 cents.

PENNSYLVANIA MARKET REPORTED NOT SO WEAK

OIL CITY, Pa., July 17.—The refined oil market in Pennsylvania has not been quite so weak during the past week. The demand for gasoline has slightly improved and the price structure remains about the same. The kerosene demand has been somewhat better than it was, but prices declined a little. The fuel oil demand eased off to some extent and prices weakened. Wax continues to move at a fairly good clip. Neutrals are a little stronger and the demand is very good.

There is still plenty of buying in bright stocks, with very little material to offer. There has been some activity in cylinder stocks.

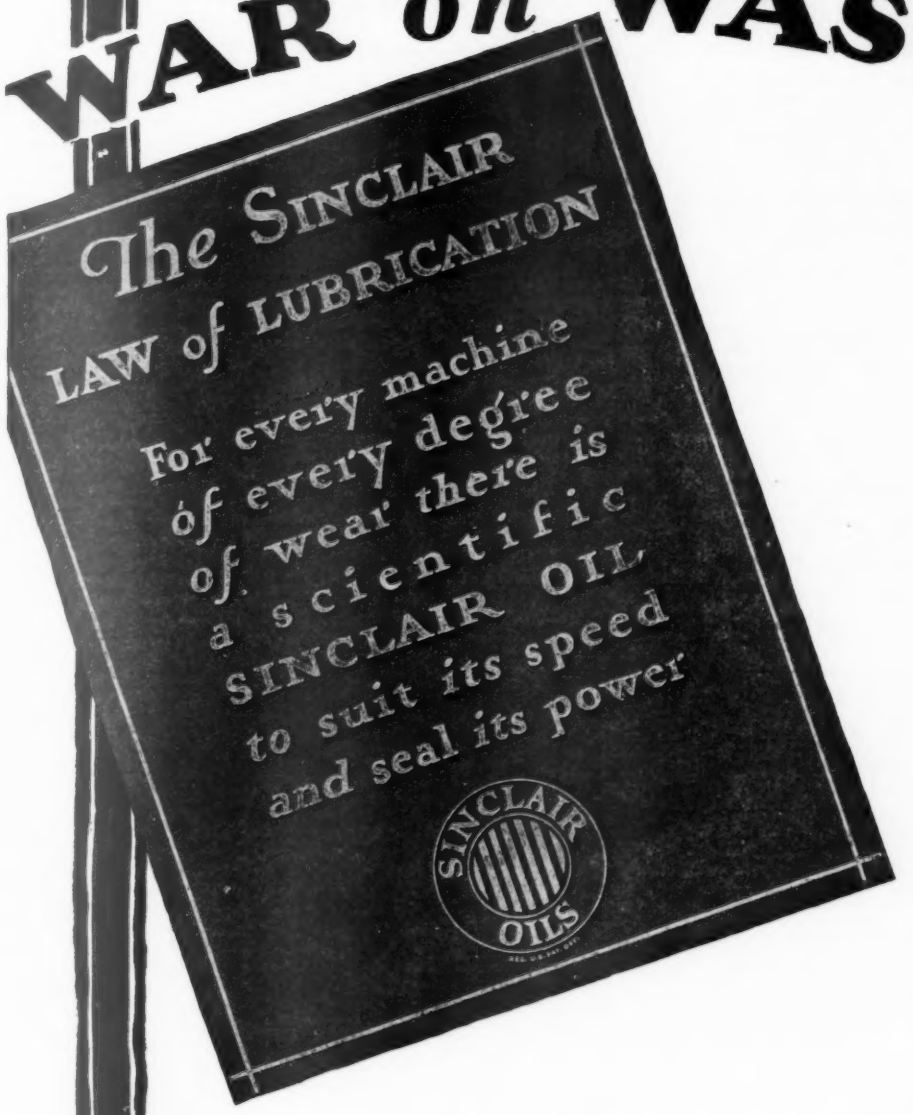
WILL ASK REHEARING ON MID-CONTINENT RATE

Oklahoma refiners will ask the Interstate Commerce Commission for a rehearing of the case involving Mid-Continent rates to western trunk line territory in which the commission the first of the month announced its decision. The commission decision authorized the railroads to advance Oklahoma rates to many of the northern points to which the refiners in the State ship the bulk of their refinery output.

The matter of asking for a rehearing of the case was discussed at a meeting of traffic managers of representative Oklahoma companies held last week in Tulsa. It is understood that similar action is being considered by several of the other groups affected by the commission's decision.

Considerable interest is also manifested in the commission's order relative to an investigation of rates on crude and refined products in the territory east of the Mississippi River and south of the Ohio River and east of the Indiana-Illinois state line. Numerous complaints have been filed regarding the rates to these points and it is believed that these are responsible for the commission's decision to have a general investigation.

WAR on WASTE!



THE motorist, in buying oil, is entitled to correct lubrication for his engine—and it is the dealer's responsibility to see that he gets it. Sinclair feels that responsibility—and therefore manufactures Opaline Motor Oil to sell according to the Sinclair Law of Lubrication—a different grade of Opaline Motor Oil "for every degree of wear" of the engine.

This means correct lubrication and economical transportation. It is the motorist's protection against *Waste of Power* and wearing of parts. This is the Sinclair dealer's method of making more satisfied customers.

SINCLAIR REFINING COMPANY
45 Nassau Street, New York
Atlanta Detroit Kansas City Chicago Houston Omaha

SINCLAIR **OPALINE** MOTOR OIL
REG. U.S. PAT. OFF.

1916-26—TEN YEARS OF MANUFACTURING AND DISTRIBUTING PETROLEUM PRODUCTS OF QUALITY

Entire Contents Copyrighted, 1926, by Sinclair Refining Co.

Oil Securities Ease Off During Week

New Jersey Chairman Announces that Statement About Planned Retirement Preferred Stock Entirely Premature

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, Room 543, 30 Church St., New York

NEW YORK, July 19.—Oil securities eased off during the past week and there was no particular feature in the trading. Petroleum issues were active and heavy during the week, recessions being recorded in a large number of issues. The outstanding expectations were oil well supply and Penn Mex fuel. The latter spurted 5 points to 24. Vacuum Oil was also in good demand.

Standard of New Jersey

Recurrence of the report in a more definite form that the Standard Oil Co. (New Jersey) was planning to retire its $200,000,000 of preferred stock resulted in the following statement by George H. Jones, chairman of the board of the company:

"The report in the morning newspapers that plans have been practically consummated for the retirement of the preferred stock of the Standard Oil Co. (New Jersey) is entirely premature. It is true that such stock may, under its terms, be retired at any quarterly dividend date; it is true that the officials of the company have had some doubt of the advisability of allowing the preferred stock to remain out permanently; and that some consideration has been given to the suggestion of calling it, provided a plan could be worked out which would clearly result to the benefit of the common stockholders of the company. It is entirely untrue, however, that the matter has been the subject of official action or of official announcement, or that any plan has received even unofficial decision."

The report published in the New York Times of July 16 follows in part:

"The Standard Oil Co. (New Jersey) has determined to retire its $200,000,000 of 7 per cent cumulative preferred stock now outstanding. To do this it must raise approximately $230,000,000, since the stock is callable at 115. Two plans are under consideration, with the likelihood that the first named will be adopted. They are as follows:

"The offering of additional common shares to present stockholders at $30 in the ratio of one new share for three now held, and which would give 'rights' to the present holders valued at about $3.50 each.

"The sale of an amount of convertible bonds equal in size to the present preferred stock issue, giving holders of these bonds an opportunity of conversion as the common shares advance.

"It was officially said yesterday that the preferred shares would be retired as soon as a plan for the general readjustment of the capital structure could be worked out on a basis that would harmonize with the views of the powerful stockholding groups which control the company."

Anglo-American Oil Co.

J. P. Morgan & Co. have offered privately $6,000,000 Anglo-American Oil Co., Ltd., serial 4½ per cent notes maturing annually in 1927 to 1929. Notes due July 1, 1927, were offered to yield 4½ per cent, notes due July 1, 1928, were offered to yield 4¾ per cent, and notes due July 1, 1929, were offered to yield 5 per cent. Proceeds are to refund in part $8,000,000 one year 4½ per cent notes due July 1, 1926, all of which have been retired. The company paid off the $2,000,000 difference out of earnings, and it expects to pay off the $2,000,000 annual maturities of the new 4½ per cent notes out of earnings.

Lago Oil & Transport Co.

F. H. Wickett, president of the Pan American Petroleum and Transport Co., announced an offer of the company's stock for the outstanding minority stock of Lago Oil and Transport Co. on the basis of one share of Pan American B for three shares of Lago. Pan American owns about 2,100,000 of 4,000,000 shares outstanding of Lago and this offer will be made to all holders.

Through this exchange Lago holders will get dividends equivalent to $2 a share each year on the present holdings, since Pan American pays $6 a year. Lago is not at present a dividend payer.

Crescent Pipe Line Co.

Removal of pipe of Crescent Pipe Line Co., which is being liquidated, will be completed by October 15. About 160 miles of line have already been torn up and 110 miles still remain in the ground. Entire 270 miles of pipe being salvaged has been sold. Announcement of the amount of assets to be distributed to stockholders can probably be made when this work is completed. A year ago directors decided to liquidate, since users of the line had turned to tank ships for supplies of crude oil and new business could not be obtained.

Pan-American Western Co.

Offerings by bankers of $7,500,000 fifteen year 6 per cent convertible bonds of the Pan American Petroleum Co., subsidiary of the Pan American Western Co., represents half of the original $15,000,000 issue created last December.

This entire issue was sold and the company received the funds at that time but only half of the issue went through the medium of a banking group and was sold to the public. The remaining $7,500,000 was withdrawn from public sale and purchased privately and it is these bonds that are now offered.

The Pan American Petroleum Co. of California properties are the old holdings of the Pan American Petroleum & Transport Co. and were acquired by the Pan American Western Petroleum Co. in May, 1925, when E. L. Doheny formed that new company at the time he sold a 51 per cent voting stock interest in Pan American Petroleum & Transport to the Standard Oil of Indiana-Blair-Chase-British interests.

The California properties were formed in 1916 as the Pan American Petroleum Co. of California. The entire $15,000,000 issue of convertible 6s were originally authorized and sold for the purpose of acquiring a 1,500-barrel lubricating plant and all the stock of the Los Angeles Midway Pipe Line Co. operating 126 miles of line running north from Los Angeles into the Midway district, and to retire obligations for extensions previously made and for working capital.

In a letter to the bankers, E. L. Doheny, chairman, states the properties consist of 26,000 acres leased or held in fee in California; a 70,000-barrel refinery with 14,000,000 barrels storage capacity near Los Angeles; the lubricating plant; wholesale marine loading station, and a total of 260 miles of pipe line. In addition to wholesale distributing stations, tank cars, etc., the company has under lease and operating 77 gasoline service stations with the company owning the improvements.

Crude oil production, Mr. Doheny states, including government leases, has been 6,013,550 barrels in 1925; 7,145,044 in 1924; 3,502,836 in 1923, and 4,557,719 in 1922. Of the total in each year, production from leases in litigation with the government (Naval Reserve) has been 1,084,112 barrels in 1925; 1,235,055 in 1924; 1,114,206 in 1923, and 1,019,770 in 1922. Net earnings available for interest, depreciation, depletion and taxes first quarter of 1926 were $1,116,581.

Regarding government litigation, Mr. Doheny states: "It is the purpose of the company to defend its rights to such property, in accordance with the terms of its leases, before the appropriate judicial tribunals."

He adds that all the Class A stock of 100,010 shares, which has the voting power, and a substantial amount of the 400,000 shares of no voting B stock of the Pan American Western Petroleum, parent company, are owned by the Petroleum Securities Co. of which he is president. "This assures close working arrangements," he states, "with the Petroleum Securities Co. which is a substantial producer of California oil."

Phillips Petroleum

Net earnings of Phillips Petroleum Co. for six months ended June 30, 1926 were $14,201,017 after deducting $2,000,000 for taxes and contingencies, but before depreciation and depletion. This compares with $10,456,494 after deducting $900,000 for taxes and contingencies in first half of 1925.

Net earnings in the June quarter were $8,079,752 before depreciation and depletion comparing with $6,121,264 in the preceding quarter and $6,090,092 in the second quarter of 1925.

The company states that net earnings in June were nearly $3,000,000, the largest of any month in its history, after charges and reserves but before depletion and depreciation.

Net production of crude after all deductions, it adds, is approximately 48,000 barrels a day which is by far the largest it has had and 86 per cent larger than the average daily production in 1925. Gasoline production is approximately 475,000 gallons daily, 44 per cent larger than the 1925 average. The company has 35 natural gasoline plants and more than 2,000 producing oil wells. The company states that it has 2,407,062 shares of common stock issued with no bonds, preferred stock or bank loans.

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

Stocks—	Par	Clos. Quot. July 19	Clos. Quot. July 12	1926 High	1926 Low	1925 High	1925 Low	1924 High	1924 Low
Amerada Corp.	..	30¼	30	31	21⅝	..	..	..	..
Atlantic Ref., com.	100	113	114	128⅜	97	117½	95½	140½	78½
Barnsdall "A"	25	25⅝	25½	33½	23½	33½	18⅝	29½	14
California Pet., com.	25	33⅛	33⅝	38¼	30⅝	34⅜	23⅞	29	19⅞
Houston Oil	100	*61	*62	72	50¼	85	59	82½	61
Independent Oil & Gas	..	23⅜	24¼	34	20¼	41¾	13½	16¼	5⅜
Indian Refining	10	11⅜	9½	13⅜	9½	14¼	5½	7	3⅜
Lago Oil & Trans.	..	22¾	23	24½	19¼	..	..	..	..
Louisiana Oil	10	16⅛	17	19⅝	12	23¾	13⅜	..	..
Maracaibo	..	23⅜	24	28⅞	20⅜	35½	20⅜	37¼	25⅝
Marland	..	58¼	59½	53⅜	49¼	60⅛	32⅝	42	29
Mexican Seaboard	..	12⅞	10⅛	12⅛	6	22½	9	25⅜	14¼
Mid-Continent Pet.	..	28¾	30	41	25⅝	38	25⅜	40¼	22⅝
National Supply	50	64	61⅞	65⅞	55½	71	54⅜	72½	54
Oil Well Supply	25	34½	30¼	36	30½	38	33⅜	..	..
Pan. Amer., B	50	69¼	72	76½	56⅛	83⅞	59⅛	65	44½
Pan. Amer., Western B	..	38¾	38¾	46	34	49¾	37½	..	..
Phillips Pet.	..	47⅛	47	48½	42½	47⅛	36⅛	52¼	28½
Producers & Refiners	50	12	12⅜	17½	11	32⅝	12½	32½	29¾
Pure Oil, com.	..	27	27¼	31	26	33⅜	25⅛	30¼	20
Royal Dutch, N. Y., sh.	13.40	53⅛	52⅞	57⅝	50	57⅜	48¼	59½	40⅝
Shell Transport	10	*43	*43	48¼	42	49	39⅜	42	33
Shell Union, com.	..	27⅞	27⅜	28½	24	28⅜	21⅝	22½	15⅜
Simms Pet.	10	17⅜	18½	28⅝	20⅜	28½	17⅜	24	10⅜
Sinclair Consolidated, com.	..	21	21⅜	24⅞	19⅝	24⅞	17	17½	15
Skelly Oil	25	33⅛	33⅛	36⅛	27	32½	21⅜	29	17⅛
Standard of California	25	59¼	59⅜	62¼	54	67¼	51⅛	68½	55⅛
Standard of New Jersey, com.	25	44	43⅜	46⅜	40¼	47½	38⅝	41⅜	33
Sun Oil Co.	..	33	33	41⅝	31½	43⅞	38⅛	..	..
The Texas Company	25	53¼	53½	55¼	49	55	42⅜	45⅝	37⅜
Texas Pacific Coal & Oil	10	13½	14	19½	12⅛	23⅜	11	15¼	8¼
Tide Water Oil	25	31½	32	..	..	..	..	..	..
Transcontinental	..	4¾	5¼	4⅝	3	5⅞	3½	6¼	3⅜
Union Oil of California	25	56⅛	55½	56	37¼	43⅜	33⅛	39	35⅛
Union Tank, com.	100	93	*92	94⅞	84¼	‡134	118	132⅞	94
White Eagle Oil & Refining	..	26¾	27⅛	29¾	26¼	31⅜	25⅝	29¾	23⅛
Standard Oils									
Anglo-American Oil	£1	17⅛	18⅛	19¾	16½	26¾	17½	18¾	14⅝
Borne Scrymser	100	*255	*260	248	226	240	205	164	150
Buckeye Pipe Line	50	51⅝	*50½	59½	52	72	63½	85½	51
Chesebrough Mfg. Co.	25	74⅜	*73	72⅜	63	74	48¼	62⅜	29¼
Continental	10	20⅜	21⅜	25⅞	19¼	31½	21⅜	..	..
Crescent Pipe Line	25	*15⅝	15	16	14½	17½	10	20	11⅜
Cumberland Pipe Line	100	*108	*107½	137	108	156	128	148	108
Eureka Pipe Line	100	*53	55	63⅜	47⅜	96	61¼	105	74
Galena Signal, com.	100	20	20	32½	17¼	68¼	23½	69⅜	62½
Humble Oil & Refining Co.	25	*60¼	60⅜	68⅛	52	99	42½	43⅜	36
Illinois Pipe Line	100	*134	134½	144	131	154½	124	161	123
Imperial Oil, Ltd.	..	35⅝	35	38⅜	32½	39¼	27¼	119	99
Indiana Pipe Line	50	*66	68¼	68	58	84	57¼	100	66
International Pet. Co.	10	32½	32⅛	35¼	28⅜	35⅜	22¼	34⅜	16⅞
National Transit Co.	12.50	15	15	20⅜	15⅜	25½	16½	25⅞	20⅝
New York Transit	100	*47	48¼	50	39	79	50	97	54½
Northern Pipe Line	100	*75½	75½	80½	70⅝	88	67½	107½	72
Ohio Oil Co.	25	*58	59½	67⅜	58	75¼	60	79½	53
Penn.-Mex. Fuel	25	24	*18¼	23	15	44	19	35⅝	27
Prairie Oil & Gas	25	51⅝	51⅝	60¼	48	65½	45⅜	269	193
Prairie Pipe Line	100	124½	124¼	127	122½	129¾	105	111	100
Solar Refining Co.	100	*188	190	212	184½	259	200	240	170
South Penn Oil	25	*36	37½	50	35	‡197	139	176	117
Southwest Pa. Line	100	*50½	50⅛	54½	57½	84	50	89	68
Southern Pipe Line	50	*65	66	74½	61½	103	63	100	80½
Standard of Indiana	25	64⅜	64½	70½	61⅝	70¾	59½	69⅝	54¼
Standard of Kansas	25	23⅛	25⅛	36½	25	46	30¼	50½	32⅛
Standard of Kentucky	25	123¾	120½	134⅜	108	137	114⅜	121⅞	101
Standard of Nebraska	100	46½	47	†51¼	†42	270	231	262	198
Standard of New York	25	33½	33⅜	47¼	31⅝	48⅝	40	48	37⅜
Standard of Ohio, com.	100	298	*295	362	292½	369	338	337½	277
Swan & Finch, com.	25	17⅜	17½	21	18	27	12	28	20
Vacuum Oil	25	104½	102⅝	109⅜	94¼	109½	80½	83½	50½
Miscellaneous									
Gulf Oil Corp. of Pa.	25	84⅜	86	93⅜	82½	98¼	63½	67⅜	56
Tide Water Associated	..	24½	24½	27	21	..	..	..	..

*Bid, no sales. ‡Old stocks. †New stocks.

The Oil and Gas Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

July 19	59.45	June 14	59.40	May 10	57.08
July 12	59.43	June 7	58.92	May 3	57.23
July 2	60.38	May 28	59.81	April 26	57.39
June 28	60.17	May 24	58.84	April 19	55.63
June 21	59.91	May 17	57.63	April 12	56.07

When the Fire Comes

Will it find your insurance based on property costs or *property values?* Your insurance policies specify the latter.

Property costs differ from property values by 50%, 100% or more, depending on the type of property and period of its acquisition. Has the difference between cost and value in your property made you an unwitting co-insurer?

American Appraisal Service will prevent waste of money in buying excess insurance. It will tell you the exact amount to carry. It will provide you with the required "proof of loss" when the fire comes.

American Appraisal Service will also enable you to establish and maintain the plant accounts in accordance with the property facts, to purchase, sell or lease buildings or equipment intelligently and to exercise adequate managerial control over the operation and protection of the plant.

Our Booklet No. 894U discusses industrial appraisals and insurance, No. 841U treats of appraisals and accounting, our chart No. 935U suggests what has happened to industrial property values during the past decade, our leaflet No. 936U gives a few interesting facts about The American Appraisal Company. These will be sent you on request.

The American Appraisal Co.

MILWAUKEE
DALLAS—Mercantile Bank Bldg.

PUBLIC UTILITIES · INDUSTRIALS · REAL ESTATE PROPERTIES · NATURAL RESOURCES

A NATIONAL ORGANIZATION

NEARLY ALL REFINED PRODUCTS ARE STRONG

(Continued from Page 28)

the summer and are relying on this to force additional jobber buying and a continuation of the present market strength. Judging from inquiries received, it now is believed by many market students that most jobbers do not have any too great reserve of gasoline and if motor consumption continues heavy there will have to be steady buying on the part of jobbers for several weeks at least.

California Situation

However, even the most bullish sellers are not overly confident of their position and are not attempting to run the market up too rapidly. They point out that conditions in other sections of the country are not any too certain and the California situation, especially, bears watching.

During the week California gasoline developed further marked weakness with refinery quotations, both on gasoline for domestic consumption and for export needs, being slashed from a half to three-quarters cent. These lower prices mean only that greater quantities of the Pacific Coast gasoline can be transported around to the Gulf Coast and Atlantic Seaboard points and dumped on the market to compete with gasolines from other refining centers, including Oklahoma and the Mid-Continent.

The lower the Pacific Coast quotations, the further inland from the Atlantic Seaboard the California gasoline can be shipped. This gradually narrows the Mid-Continent market scope and forces more and more Mid-Continent gasoline back on the refiners unless prices are cut to meet the competition.

Oklahoma refiners, however, are hopeful that they can tide over this situation, expecting the bulk of this gasoline to be taken up by the increasing motor consumption in all parts of the country, and that the demand in their marketing territory will be sufficient to strengthen the prices further and prevent a tank-wagon cut.

The margin between tank car and tank-wagon prices in the Standard Oil Co. of Indiana territory still is dangerous but the rate inquiries are coming in leads refiners to believe that jobbers are getting more and more confidence in the situation, at least for several weeks.

Crude Market

There is considerable discussion about an easier crude situation but market students apparently do not feel there will be any change in Mid-Continent postings before 30 or 45 days. At least present sales are not being made on a basis of discounting any crude reduction but, on the other hand, the trend is upward.

Fuel Oils Revive

The most noticeable change in market trends during the week was that of fuel oils. Fuel oils have been weakening steadily since early in May, when the keen demand experienced during March and April began to slacken. These products have been almost inactive since then but the past week a very material increase in buying was enjoyed.

Most of the orders came from buyers who usually make purchases the first of each month but who had put off buying as long as possible, expecting lower prices. However, it was at this time last year that fuels touched their low mark and began to strengthen with buying for autumn and winter requirements. Fuels slipped a little during August but the general trend from this time on was upward.

So far as reported there have been no contracts made with industrial consumers for next season's requirements. There has been little interest in this subject as refiners are of the general opinion that the market this year will not be determined by these industrial contracts but rather by cracking needs.

Distillate contracts also have caused but little interest among refiners although numerous inquiries are being received from jobbers. One large refiner, who usually begins making contracts early in July for the following season's delivery, reported Tuesday that he had not made a contract.

Contracts for distillate generally are being delayed because of the uncertainty as to a basis for contracts. Refiners say they might make contracts on a spot market basis but say jobbers are seeking a maximum clause.

The gasoline situation was given an added bullish tone the past week with the report from reliable sources that one large company was seeking to contract 500 cars a month of the 60-62 400 end point gasoline. It also was rumored that this same company already had an option of a substantial quantity of the same material for immediate delivery. So far as checked, howeved, this option, if true, has not been exercised.

However, this grade of gasoline was fairly firm as several large buyers have kept this market in good shape by recent purchases. Due to the export posting reduction of the previous week the actual market, though, was a little uncertain. The prevailing quotation was 11¾ cents in Group 3. A few refiners reported moving a few cars at 12 cents.

The 64-66 375 gasoline and other higher gravities were practically inactive and due to the recent export reduction tended toward weakness. One Oklahoma refiner was reported to have offered 1,000,000 gallons of this material earlier in the week at the Standard Oil Co. of New Jersey posting of 11.55 cents. Other refiners were holding a quotation of 12½ cents but without sales. Some material was moved at 12¼ cents, it was reported.

The U. S. Motor (58-60 437) gasoline was the really strong point in the market with an advance of a quarter cent in a week. This gasoline was strong at 11¼ cents Tuesday with some refiners reporting sales at 12½ cents. Several refiners still are in the market for this material and are keeping any possible distress gasoline from being dumped on the market.

The 450 end point gasolines received few calls and their advances in price were due principally to stronger U. S. Motor gasoline markets. There has been very little demand for these gasolines at any time this summer contrary to trends in previous seasons. Naphtha, in many cases, was bringing more to refiners than either the 56-58 450 or the 58-60 450 gasolines. Rumors, however, were to the effect that some refiners were offering naphtha at 10½ cents, but other refiners reported sales good at 11 cents. There is very little naphtha available from refiners with Tulsa offices.

Natural Gasolines

Natural gasoline developments were far from satisfactory, although some sellers reported a slight improvement in demand for small quantities. It is admitted there is too much of this gasoline being produced. There is not a great deal of Grade C on the market, but other grades are more than plentiful. Prices were slightly higher, reflecting the strength of straightrun gasolines, with sellers holding out for 8¾ cents on the A grades and 8¼ cents on the B grades. C was firm at 8 cents.

Kerosene, as previously mentioned, advanced a cent during the week. There was little trading, but purchases the previous week removed practically all this product from the market. Several refiners were quoting 7 cents Tuesday, but 6¾ cents seemed the market price. A few buyers were able to pick up a car or two at 6½ cents, but this was not general. When kerosene prices dropped to 5¼ cents from a former 10¼-cent mark, most refiners cut their production to a minimum, leaving only enough to take care of their regular trade. As a result, with the stocks almost depleted by the heavy buying a week ago, there is but little material to supply the regular demand.

Distillates were not active, but due to the tendency of refiners to store their product in anticipation of later markets, spot quotations were strong. Buyers were forced in many instances to pay 4¾ cents for the 38-40 straw grade. Inquiries for distillates are coming in, but so far no contracts have been reported. However, as it is past the usual time for making such contracts, sales will have to be started in the near future which may mark some important developments in distillates.

Fuel Oil and Gas Oil

Fuel oils experienced an upward reaction during the week with all grades advanced from 2½ to 5 cents as a result of an increase in demand. Tuesday there was little fuel below $1.20, even on the low gravities. The 24-26 material was tight at $1.25, which the 26-28 and the 28-30 fuels reflected material strengthening because of their scarcity. The 26-28 fuel was quoted, where available, at $1.30, with some cars at $1.27½, and the 28-30 grade from $1.35 to $1.40.

Gas oil continued strong. The demand for cracking stock was noticeably greater and with the market cleaned of this material by substantial purchases the last few weeks, the advances in quotations were in order. Cracking stock was not available under 4⅛ cents, and many buyers had to pay 4¼ cents.

Practically all grades of lubricating oils showed increased demand the past week and quotations were generally firm. The most noticeable feature of the lubricant situation is the wide range of prices at which sales are reported made. This was especially true of the 200 viscosity No. 3 color neutral, which is the chief blending stock. One manufacturer reports sales at 12½ cents, while another says he is not getting more than 11 cents.

Wax was weak, as this is an off season for Mid-Continent manufacturers. No inquiries were reported, so the quotation of 4¾ cents was practically nominal.

Late Fields

(Continued from Page 37)

pump made 30 bbls. Columbia Petroleum Co.'s No. 8 Puig swabbed at the rate of 800 bbls. Ruthada's No. 3 made a 135 bbl. well on the pump and No. 4 swabbed at the rate of 400 bbls. Gibson Oil Corp.'s No. 6 swabbed at the rate of 1,000 bbls. and No. 8 at the rate of 500 bbls.

In the Cole Field Killam's No. 2 Lopez and Cole Petroleum Co.'s No. 26 Benavides each made gas wells of about 30,000,000 feet.

To relieve the water situation in the Carolina-Texas Field where many wells are endeavoring to spud in, Houston Oil Co. is laying a 4-inch line from its tank farm at Bruni, where it has some water wells and where water is easy to get and will later use the line to run oil to its tank farm.

The Humble company has bought 20,000 acres in Duval County, a little north of the Cole gas field, and has contracted to drill seven wells on it.

A number of minor deals for acreage were announced late last week in the Carolina-Texas Field. The Gulf company paid $3,200 for Survey 32, containing 640 acres; Sun Oil Co. bought Blocks 12 and 13 in Survey 45, containing in all 80 acres; The Texas Company bought from L. W. Stieren Block 12, containing 40 acres and the east 30 acres of Block 11 and 10 acres out of Block 13 in Survey 681.

NORTH TEXAS AND PANHANDLE

FORT WORTH, Tex., July 20.—Gulf Production Co.'s No. 10 Dial, Section 24, Block 47, Hutchinson County, flowed 587 bbls. in 21 hours. It was then shot with 75 quarts at 2,845-95 feet and bridged. It is now spraying 20 bbls. hourly. Gulf Co.'s No. 1 McElroy, Crane County, was deepened 2 feet but not helped. The Texas Company's No. 1-F, Crane County, flowed 50 bbls. by head after standing.

Marland's No. 6 Sanger, big Upton County well, made 730 bbls. July 16, then 550 bbls., 475 bbls. and stopped flowing on July 19.

Winkler County well is waiting on special packer from Eastland. It will be several days before it is tested. Eastland Oil Co.'s Wright, in the Parsons Pool, Eastland County, swabbed 50 bbls. Lewis' No. 2 Wright found salt water in sand at 1,600-17 feet. Roeser & Pendleton's No. 5-B-84, in the northeast extension of the Cook Pool, Shackelford County, made 1,000 bbls.; No. A-10-84, an inside well, is dry. The total production of the Cook Pool is 9,000 bbls. today.

MEXICO

English Oil Co. completed No. 13 Rufino, producing 5,000 bbls. at 1,680 feet. Marland Oil Co. brought in No. 58 Limon with 1,000 bbls. at a depth of 2,090 feet; and Corona (Royal Dutch Co.) completed No. 24 Corcovado, a 1,000-bbl. stripper, at 1,844 feet.

CRUDE OIL PRICES

(Continued from Page 143)

Big Muddy	2.25
Mule Creek	1.75
Grass Creek, light	2.40
Grass Creek, heavy	.90
Elk Basin	2.40
Lance Creek	2.40
Rex Lake	1.45
Osage	2.40
Lost Soldier (contract)	1.35
Greybull-Torchlight	2.15
Hamilton Dome	1.35
Cat Creek (Mont.)	2.40
Sunburst (Mont.) (May 6)	1.06
Florence (Colo.)	1.60
Artesia	1.95
Hogback (N. Mex.)	2.45

Note: Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

EASTERN STATES

Joseph Seep Purchasing Agency

(Effective March 8)

Penna Grade Oil in New York Transit Lines (New York)	$3.40
Bradford District Oil in National Transit Lines (Pennsylvania)	3.40
Penna Grade Oil in National Transit Lines (Pennsylvania)	3.30
Penna Grade Oil in Southwest Pa. Line Lines (West Virginia)	3.30
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	3.25
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	3.05
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia) (May 17)	2.40
Corning Grade Oil in Buckeye Pipe Line Lines (Ohio) (May 22)	2.55
Somerset Medium Oil in Cumberland Pipe Line Lines (Kentucky) (May 17)	2.50
Somerset Light Oil in Cumberland Pipe Lines (Kentucky) (May 17)	2.05
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky) (May 19)	1.25
Gaines (Pennsylvania) (Apr. 27)	2.85
Keister (Pennsylvania) (Feb. 15)	2.30

MIDDLE WESTERN STATES

Ohio Oil Co.

(Effective May 17)

Lima	$2.45
Wooster	2.55
Illinois	2.37
Indiana	2.25
Princeton	2.37
Plymouth	1.90
Waterloo	1.85
*Western Kentucky, 32.9° and below (May 18)	2.10
33° to 35.9° (May 18)	2.20
36° to 38.9° (May 18)	2.30
39° and above (May 18)	2.40
†Cumberland, Barren and Monroe Counties, Ky. (May 17)	2.05
**Oil in lines of Stoll Oil Refg. Co. in Oil City, Ky.	2.05
**Oil in lines of Stoll Oil Refg. Co. in Tinsley Bottom, Tenn.	2.40
§Oil Springs (Canada) (May 18)	2.95
§Petrolia (Canada) (May 18)	2.88

**Posted by Stoll Oil Refg. Co.
*Posted by Indian Refining Co. †Posted by Paragon Development Co. §Posted by Imperial Oil Co., Ltd.

MEXICO

(Effective May 13)

*Tuxpam light (f.o.b. Mex. ports)	$1.85
§Panuco heavy (f.o.b. Mex. ports)	1.15
Tuxpam (New York)	2.15
Panuco (New York)	1.80

*Plus 32.328c tax. §17.631c tax.

BUFFALO REPRESENTATIVE

The Homestead Valve Manufacturing Co. announces the appointment of the F. A. Herr Co., 360 Warwich Ave., Buffalo, N. Y., as a representative of the Homestead Valve Manufacturing Co. in the Buffalo and Rochester district.

NORTH CENTRAL TEXAS

(Continued from Page 38)

ke and others' No. 1 William Bristow, shut down at 590 feet.

Kent County

The Texas Company's No. 1 Barron, drilling at 3,825 feet.

Loving County

Lockhart & Co.'s No. 1 E. L. Allen, drilling at 770 feet, top of salt 695 feet.

Lynn County

Hart Oil Corp.'s No. 1 C. O. Edwards, shut down at 860 feet.

Mitchell County

California Co.'s No. 1 J. J. Handley, location. Magnolia Petroleum Co.'s No. 1 Kloh & Rumsey, drilling at 4,145 feet. Mid-Kansas Oil & Gas Co.'s No. 2 Ellwood. Morrison & Thompson's No. 1 Hyman, drilling at 3,025 feet. Owens & Sloan's No. 1 C. P. Conoway, fishing tools at 365 feet. Texas & Stiver's No. 1 Hardee, rigging up.

Pecos County

Cromwell & Kimberlin's No. 1 Scharff-Blackman, rig. Dixie Oil Co.'s No. 1 Hershensen, drilling out cement, 4,981 feet. Quinby Oil Co. and others' No. 1 Townsite, shut down at 2,800 feet. Transcontinental Oil Co.'s No. 1 Perry, drilling at 3,275 feet. West Texas Exploration Co.'s No. 1 Macy, shut down at 1,160 feet.

Presidio County

Hadlock-Miller and others' No. 1 Tootle estate, fishing for 6-inch at 2,200 feet.

Reagan County

H. D. Camp and others' No. 1 University, shut down at 2,677 feet. Marland Oil Co.'s No. 1 University, location. Marland & Mascho's No. 1 Sawyer Cattle Co., drilling at 2,610 feet with a hole full of sulphur from 2,500-10 feet. Marland Oil Co. and Frank Pickrell's No. 1 Sawyer, fishing for tools at 2,330 feet. Ben Simon and others' No. 1 R. A. Walters, shut down at 2,030 feet. Texon Oil & Land Co.'s No. 1 University, drilling at 2,530 feet.

Reeves County

Gresham & Hunter's No. 1 State Land, drilling at 400 feet. Humble Oil & Refining Co.'s No. 1 Kloh & Rumsey, drilling at 4,274 feet.

Runnels County

Sillix-Rainwater and others' No. 1 Krubber, shut down at 480 feet.

Schleicher County

Beavers-Leath and others' No. 1 Whitten, spudded and shut down.

Scurry County

Fogelson and others' No. 1 Bryce, shut down at 1,905 feet; No. 1 Haney, location. Northwest Co.'s No. 1-A H. P. Welborn, cleaning out at 3,428 feet.

Stonewall County

Camp Springs Oil & Gas Co.'s No. 1 Guinn, shut down at 3,866 feet. Arkansas Fuel Oil Co.'s No. 1 Craft, shut down at 3,698 feet. Swenson Oil Corp.'s No. 1 Ward, shut down at 3,828 feet.

Sterling County

California Co.'s No. 1 Davis, drilling at 3,125 feet. Co-Operative Development Co.'s No. 1-A E. W. Douthitt, shut down 2,675 feet. Exploration Co.'s No. 1 C. A. Broome, drilling at 1,020 feet. H. D. Rummel and others No. 1 L. T. Clark, shut down for orders 1,175 feet.

Sutton County

Chesapeake Oil Co.'s No. 1 Clarkson-Allison, drilling at 3,400 feet.

Taylor County

Sanger Oil & Refining Co.'s No. 1 Norwood, shut down at 3,440 feet. No. 1 Anderson, shut down at 1,916 feet.

Terrell County

Sun Oil Co.'s No. 1 M. Scott, moving in material. E. T. Williams and others' No. 1 Snowden, fishing at 1,260 feet.

Upton County

M. D. Bryant and others' No. 1 Baker, location. W. W. Donnelly & Gerke's No. 1 Rankin, drilling at 550 feet. W. H. Dunning and others' No. 1-A J. T. McElroy, location; No. 2-A J. T McElroy, location. Gulf Production Co.'s No. 1 Sanger, total depth 2,760 feet, 250 feet oil and 2 bailers water in hole after standing 12 hours. Humble Oil & Refining Co.'s No. 1 McElroy, spudded and rigging up; No. 1 Ricker-Dodson, drilling at 2,145 feet. Roxana Petroleum Corp.'s No. 1 B. H. Estep, drilling at 615 feet, top of the salt at 600 feet; Co.'s No. 1 Emma Wooley, 1,000 feet oil in the hole at 2,048-68 feet, fishing for bit; No. 2 building rig. Marland Oil Co.'s No. 9; No. 2-A Burleson; No. 6 Sanger; No. 7 Sanger; No. 8 Sanger; No. 9 Sanger; No. 1 T. E. Shirley. Republic and Marland's No. 3 Baker, drilling at 2,145 feet, top of salt 600 feet; No. 1 Della Bowen, rigging up; No. 2 Della Bowen, location. Sartain Brothers & Davis' No. 1 Bull, drilling at 400 feet. Skelly Oil Co.'s No. 1 O. P. Jones, spudding at 25 feet. Sun Oil Co.'s No. 1 Burleson, drilling at 600 feet, top of salt 510 feet; No. 2 Burleson, rigging up; No. 3, moving in material. Texas Pacific Coal & Oil Co.'s No. 1 Shirk, location. The Texas Company's No. 1-C Union Land Co., repairing rig at 2,850 feet. The Texas Company's No. 1 R. King, rig; No. 3 King, material on the ground; No. 4 King, location; No. 5 King, rig up; No. 1 A. S. Burleson, location; No. 2 A. S. Burleson, location.

Val Verde County

East Del Rio Oil Co.'s No. 1 Russell & Weathersbee, shut down 2,882 feet. A. Blume and others' No. 1 Moore estate, drilling at 2,400 feet. Independent Operators' No. 1 Whitehead, drilling at 3,340 feet. Plateau Oil Co.'s No. 1 B. S. Harrison, shut down for 8-inch at 2,450 feet.

Winkler County

Brandon-McCamey and others' No. 1 Kloh & Rumsey, drilling 650 feet. L. D. Ladd and others' No. 1 J. W. Amburgey, moving in material. R. S. Matthews and others' No. 1 Cowden Cattle Co., location. Taliaferro and others' No. 1 Sealy, location. R. A. Westbrook and others' No. 1 T. G. Hendricks, top of salt 1,930 feet, 1,800 feet of oil and water in the hole from sand topped at 2,525 feet, made one flow of 25 bbls.

The Howard Petroleum Co. and others abandoned their No. 1 M. K. Inman A, Clay County, at 570 feet on account of hole trouble, and skidded the rig and started a new hole. It is a 3,000-foot test.

Estimated Production, Week Ending July 17

Ranger District—	
Brown County	10,085
Callahan County	4,205
Coleman County	1,320
Comanche County	1,870
Palo Pinto County	440
Ranger	5,779
Shackelford County	10,810
Stephens County	11,784
Total Ranger Dist.	46,293
Wichita Falls District—	
Electra	16,143
Burkburnett	12,223
Iowa Park	4,276
Archer County	30,718
Clay County	533
Wilbarger County	15,342
Montague County	4,690
Young County	7,946
Jack County	175
Throckmorton County	471
Baylor County	125
Cooke County	165
Total Wichita Falls Dist.	92,807
West Texas District—	
Big Lake Field	29,278
Crane County	217
Crockett County	972
Howard County	44
Mitchell County	3,297
Scurry County	52
Upton County	4,160
Total West Texas Dist.	38,020
Grand Total	177,120
Grand Total last week	175,105
Increase	2,015

The increase in the daily average estimated production in the north and west Texas districts during the past week was due to Shackelford, Brown, Callahan and Upton Counties for the most part. Brown County registered the greatest gain, having jumped 1,520 bbls. daily to a new peak of 10,085 bbls., the first time in the history of the county that the production soared above the 10,000-bbl. mark. Chiefly responsible for this gain was the Humble Oil & Refining Co. which has brought in some excellent producers during the past two weeks in the northwest extension of the Dunn-Stover Pool southwest of Rising Star. The Humble now has 3,550 bbls. of production in Brown County, giving it first rank among the companies in that county. Callahan County's increase was 216 bbls. due to the Prairie Oil & Gas Co.'s activities in the southwest extension of the Cross Plains townsite pool.

Shackelford Gains

Shackelford County registered a gain of nearly 1,000 bbls., rising to 10,810 bbls., a figure within 55 bbls. of the county's peak production of the week ending June 12 this year. Several good producers in the Cook Ranch Pool northwest of Albany, one of them almost equal to the record producer of the pool, were responsible for the gain.

All counties in the Wichita Falls district remained about the same, small gains in some offsetting losses in others. Wilbarger declined 237 bbls. although Phillips Petroleum Co.'s average rose to 6,303 bbls. in that county, and Young County gained 262 bbls. due to wells on the Rachuig and Benson land. Montague County also increased 128 bbls. to 4,690. Cooke County now figures in the production columns as a result of the Hooser and other wells on the Hyman land, the daily average being 165 bbls.

The reason for Upton County's gain is well known, as the recent big producers there have attracted attention throughout the oil world. The Dixie Oil Co.'s No. 2 Hughes was continuing at the close of last week to maintain its gusher flow, holding up above 2,000 bbls. and while the Marland Oil Co.'s No. 6 Sanger was not as good a well as first reports indicated, it was nevertheless a worthwhile producer in any field. It was declining rapidly from the peak of 1,000 bbls. during the first 6 hours but at latest reports was still yielding more than 700 bbls. daily. Several other completions on the Sanger and Burleson land in the Hurdle District helped the Upton County average for the week.

COMPLETIONS

Archer County

Ashcraft and others' No. 1 Star was dry and abandoned at 2,000 feet. Brown's No. 1 Perkins, Section 14, League 3, D. C. & S. L. Survey, A-117, had oil sand at 1,018-29 feet and pumped 60 bbls. Burns' No. 1 McCrory "F" in Lot 2, Section 72, A. T. N. C. L. Survey, was dry and abandoned at 1,650 feet. Caldwell and Consolidated Oil Co.'s No. 4 Hutcheson, Lot 13, Power Subd. of Section 123, A. T. N. C. L. Survey, had oil sand at 1,381-89 feet and was good for 125 bbls. on the pump. The Dale Oil Corp.'s No. 5 Wilson "F" in Lot 7, Section 22, A. T. N. C. L. Survey, was a failure and plugged at 1,632 feet. The Garry Oil Co. abandoned the location for No. 1 Evans which has been shut down for some time after it was spudded 20 feet. The rig has been moved away. The Kentucky Oil Co.'s No. 2 Wilson "N" in Lot 4, Section 75, A. T. N. C. L. was preparing to set 6 inch at 1,398 feet to test a small showing of oil in sand at 1,401-03 feet. The McCarty Oil Co.'s No. 1 Wilson-McCrory was also testing an oil sand at 1,582-86 feet. The Mid-Kansas Oil & Gas Co.'s No. 1 Andrews in Section 137 of the Robert Carson Survey was estimated good for 20 bbls. in oil sand at 1,292-96 feet. It was not completed. The Simms Oil Co.'s No. 2 Tuberville "A," another well making oil but uncompleted, in Section 172 of the Robert Carson Survey, swabbed approximately 250 bbls. from oil sand at 1,529 33 feet. The Texhoma Oil & Refining Co.'s No. 5 Parrish "A" in Lot 95, Geraldine Subd., Madison County School Lands, was dry and abandoned at 1.600 feet.

L. T. Burns' No. 1 DeMoss in the Ikard, Coulson & Hutchinson Survey, A-756, was a failure and plugged at 1.511 feet. Cook & Reeder's No. 1 Kunkel had sand at 1,171-73½ feet good for 60 bbls. of oil and 20 bbls. of salt water and was completed. Cosden & Consolidated Oil Co.'s No. 3 Frank Jehlik, Section 131, Harris Club Ranch Subd., was dry and abandoned at 1,200 feet with no sand. Davis and others' No. 1 Hausler, was also a duster at 1,150 feet, having drilled dry sand at 1,131-38 feet. Gates and others' No. 1 Thomas in the North Subd. of Nathan Thomas Survey was swabbing 10 bbls. hourly from sand at 1,152-66 feet and was preparing to pump. It was not completed. Kell & Kruger's No. 3 Prideaux in the J. I. Hand Survey, A-181, pumped 20 bbls. from sand at 685-96½ feet. The Lewis Oil Corp.'s No. 3 Prideaux in the A. Rohus Survey, A-1,126, pumped 15 bbls. from sand at 629-35 feet. Jesse Lincoln's No. 2 Wilson, in Lot 1, Section 2, S. P. R. R. Survey, A-859, was dry and abandoned at 1,390 feet. It bailed salt water from sand at 1,302 06 feet. Long and others' No. 1 Harris, Section 77, Harris Club Ranch Subd., encountered no sand so it was abandoned as dry at 1,502 feet. Murchison and Fain and others' No. 2 Deitrich, swabbed 196 bbls. in 24 hours from sand 1,168-76 feet and was being put on the pump, so was not completed. No. 3 Deitrich was dry and abandoned at 1,215 feet, having encountered no sand. Murchison & Fain's No. 1 Logan-B was cleaning out following a shot of 8 quarts in sand at 1,121-31 feet. There was 200 feet of oil in the hole. This well is in the Allison Arms Survey, A-5. The Pandem Oil Corp.'s No. 1 Hudson, Section 80, J. W. Harris Club Ranch Subd., pumped 16 bbls. from sand at 1,128-35 feet, total depth 1,137 feet. No. 3 Thomas in Lot 5, North Subd. of Nathan Thomas Survey pumped 80 bbls. from sand at 1,149-55 feet. No. 6 Young in Section 2,432 T. E. & L. Survey was not completed but swabbed 240 bbls. from sand at 1,434-46 feet and was being put on the pump. The Shasta Oil Co. and others' No. 2 Meade Estate A in Section 39 of the G. P. Meade Subd., of the "LM" pasture was also uncompleted but was swabbing half a barrel an hour from sand at 1,439-53 feet and was being placed on the pump. The Sun Oil Co.'s No. 1 Abercrombie-C in Section 82 of the Harris Club Ranch Subd., had dry sand at 1,137-41 feet and was drilling ahead at 1,212 feet. The Texas Company's No. 5 Prideaux in the John Dorsey Survey, A-122, had sandy lime at 655-63 feet and will shoot it. The Texhoma Oil & Refining Co. & Perkins' No. 1 Robertson was dry and abandoned at 1,500 feet, having found no sand. The United Prod. Co.'s No. 3 Prideaux-A in the J. I. Hand Survey, A-181 pumped 15 bbls. from sand at 682½-704 feet.

Brown County

Curry & Moore's No. 1-A Pickett, Section 158, E. T. R. R. Survey, was good for 5 bbls. initially from sand at 1,141-48 feet. total depth 1,165 feet. The Gibson Oil Co.'s No. 1 White in the D. B. Vernon Survey, A-935, was not completed but swabbed 6 bbls. from sand at 1,220 28 feet and was drilling at 1,260 feet. Gilman & McMurray's No. 8 Teston, in the W. B. Smith Survey, No. 155, had a showing of oil in sand at 1,248-59 feet and was still drilling at the latter depth. Gwinnup and others' No. 1 Runge, was a location abandoned. Harris, Hayes & Co.'s No. 1 Armstrong in Section 1, H. & G. N. Survey, was dry and abandoned at 1,500 feet. Herring's No. 3 Prater, Section 145, Wm. L. Swain Survey, was dry and abandoned at 1,324 feet after getting a show of oil in sand at 1,314-17 feet. The location for the Humble Oil & Refining Co.'s No. 2 J. H. Allen, Section 7, Juan Delgado Survey, No. 785 was abandoned, as was also the location for the same company's No. 2 W. W. Allen in Section 8. The Humble's No. 3 W. W. Allen in Section 8, same survey, was good for 264 bbls. after it was squibbed with 7 quarts in sand at 1,150-60 feet. No. 2-B E. P. & W. H. Kilgore, in Section 2, same survey, was dry and abandoned at 1,133-38 feet; No. 3-B was estimated good for 100 bbls. at 1,157-82 feet; No. 4-B gauged 819 bbls. in sand at 1,149-73 feet, total depth being 1,174 feet; the location for No. 9-B was abandoned; No. 2-C E. P. & W. H. Kilgore in the Thomas Benson Survey, No. 783, made 100 bbls. from sand at 1,150-80 feet; No. 1-D in Section 2, Juan Delgado Survey No. 785, produced 200 bbls. initially from sand at 1,155-59 feet after a 6-quart shot; No. 2-D was junked and abandoned at 475 feet and the rig skidded 15 feet to the north; No. 2-B J. C. Kilgore in Section 3 of the J. Delgado Survey, was a 500-bbl. well at 1,148-57 feet; No. 4-B in the same section produced 600 bbls. from sand at 1,152-76 feet, total depth being 1,177 feet; No. 5 Leatherwood in Section 11 was not completed but had a showing of oil at 1,137 feet and was shut down at 1,138 feet. All of the foregoing wells belong to the Humble Oil &

XUM

Refining Co. Lester's No. 1 Fry in Blk. 621, Grandoin Survey, near the town of Thrifty, is marked up as a completion at 1,309 feet, making 100 bbls. of oil and 5 bbls. of water. The Pandem Oil Corp.'s No. 4 Westerman in the N. B. Mitchell Survey No. 150, was shot with 10 quarts and made 30 bbls. from sand at 1,258-74 feet. The Phillips Petroleum Co.'s No. 6 Dunn in Section 12, Juan Delgado Survey No. 785 was shot with 7 quarts and produced 20 bbls. afterward from sand at 1,171-78 feet, total depth being 1,179 feet; No. 7 Dunn in the same section was dry and abandoned at 1,200 feet. The Prairie Oil Co.'s No. 1 Pickett, Section 158, W. A. Foster Survey, was good for 100 bbls. in sand at 1,159 74 feet, total depth 1,195 feet. Schaffner & Wilson's No. 11 Prater in the Wm. Miller Survey No. 149, was a 50 bbl. well at 1,262-75 feet, total depth 1,295 feet. The Texas Company's No 4 Edington was not completed but had a showing of oil in sand at 1,268-81 feet and was still drilling. West & H-Y Oil Co.'s No. 5 Newton in the Robert Mitchell Survey No. 141 was junked and abandoned at 740 feet and the rig skidded for a twin well. Wilson's No. 2 Wooldridge in the H. B. Gaines Survey was dry and abandoned at 1,300 feet.

Baylor County

Bridwell, Heydrick and others' No. 1 Schindler was dry and abandoned at 1,529 feet. It had sandy lime at 1,482-86 feet and a small show of oil at 1,486-90 feet but the sand tested dry and then water sand was encountered at 1,490-1,500 feet. Hoover's No. 14 Mills in Section 2,428, T. E. & L. Survey, A-467, was not completed but had an oil sand at 1,408 28 feet and water at 1,436 feet. It was drilled to 1,474 feet and will be plugged back to shut off the water and test the upper showing.

Callahan County

Denny & Andrews' No. 1 Jackson was dry and abandoned at 1,810 feet The Moutray Oil Co.'s No. 1 James, Section 149, B. B. B. & C. Survey, mentioned last week as opening a shallow pool, was completed for 24 bbls. on the pump from sand at 695-708 feet.

Clay County

The Simms Oil Co.'s No. 1 Waggoner in the K. M. McKenzie Survey, A-328, was dry and abandoned at 2,003 feet.

Coleman County

In the Dibrell Pool, the Independent Oil & Gas Co.'s No. 4 Dibrell was good for 70 bbls. from sand at 1,865 82 feet. Reeves & Meredith's No. 1 Hall, in the O. P Haynes Survey, was abandoned as a duster at 2,004 feet.

Eastland County

Corzelius Bros. and others' No. 1 Garrett was dry and abandoned at 3,505 feet. Evans and others' No. 1 Fox had dry sand at 1,857-60 feet and was shut down to plug at 1,880 feet. Lewis and others' No. 2 Wright, Lot 47, League 3 and 4, McLennan County School Land, was not completed but had a sand at 1,580-90 feet and a break from 1,590-1,600 feet. It was drilling at the latter depth. The Robert Oil Corp.'s No. 1 Gullett in Section 66, League 3 and 4, had a dry sand at 1,645-70 feet but was dry and abandoned at 1,702 feet. Simon and others' No. 1 Morgan was good for 100 bbls. at 2,907-3,027 feet, total depth 3,035 feet. The Texas Company's No. 1 Noble and others' pumped 100 bbls. initially but dropped to 26 bbls. at latest report from sand at 3,290-96 feet, total depth 3,307 feet.

Erath County

Goodwin's No. 4 Laney was completed for 200,000 feet of gas in sand at 2,662-85 feet, total depth being 2,805 feet.

Jack County

Guthrie and others' No. 4 Mrs. Snedeker in the J. Robbins Survey, A-490, was uncompleted but had 300 feet of oil in the hole from sand at 783 92 feet and was preparing to pump. Howard and others' No. 2 Stewart, Section 2,783, T. E. & L. Survey, found no sand so was dry and abandoned at 510 feet. McGregor and others' No. 1 Hedrick in Lot 1, Wm. McDonald Survey, A-378, was a failure at 607 feet, with no sand. Ryan and others' No. 1 Loving had no sand so was plugged at 802 feet. The Wolf Oil Corp.'s No. 1 Wilson was another well that missed the sand and was abandoned at 1,865 feet. Wellman and others' No. 1 Patton had dry sand at 740-52 feet and was plugged at 867 feet.

Montague County

The F. H. E. Oil Co.'s No. 2 Howard-A pumped 35 bbls. from oil sand at 1,127-35 feet, with broken sand at 1,135-57 feet. The Humble Oil & Refining Co.'s No. 10 Hinds, in the J. J. Wall Survey, A-1,199, had sands at 901-12 and 922 35 feet, total depth 943 feet. It pumped 21 bbls. in 9 hours. No. 2 J. W. Maddox pumped 28 bbls in the first 6 hours from sand at 858-67 feet, total depth 880 feet. It swabbed 150 bbls. before it was put on the pump. The Pure Oil Co.'s No. 1 J. W. Maddox-C in Cyrus Thompson Survey, pumped 65 bbls. from oil sand at 880 902 feet. The Texas Company's No. 11 I. A. Gist-A, Wm. Donoho Survey, was running tubing and packer and estimated good for 75 bbls. at 868-75 and 878-93 feet, total depth 894 feet; No. 12 pumped 75 bbls. from sand at 906-18 feet; No. 9 Oldham and others pumped 140 bbls. from oil sand at 1,137-49 feet. The Texhoma Oil & Refining Co & Republic Prod. Co.'s No. 2 Rowland, in the John Chambliss Survey, pumped 78 bbls. the first 24 hours from sand at 1,041-51, feet, total depth 1,052 feet. No. 9 Hinds in the J. J. Wall Survey, was good for 33 bbls. from sand at 958-68 feet. The Texhoma Oil & Refining Co.'s No. 5 N. J. Howard-A pumped 53½ bbls. from sand at 1,126-35 feet and 1,138½-40 feet and 1,142-44 feet, total depth being 1,148½ feet.

Palo Pinto County

Moore & Snebold's No. 2 Robinson, Section 53, Blk. 3, T. & P. Survey, made 15 bbls .after a 30-quart shot in sand at 1,501-25 feet.

Shackelford County

The Hope Petroleum Co.'s No. 2 Davis, a location north of the discovery well in Section 13, Blk. 12, T. & P. Survey, west of Albany, was completed for 260 bbls. at 1,459-71 feet. Hughes and others' No. 1 Moberly in the NE cor of Section 86, Blk. 10, E. T. R. R. Survey, south of the Cook Ranch Pool and east of the Magnolia Petroleum Co.'s recently completed pumper, has finally been listed as a dry hole at 1,425 feet. It has been shut down for some time after the rig was pulled in. The Robert Oil Corp.'s No. 1 Davis was dry and abandoned at 1,618 feet. In the Cook Ranch Pool, Roeser & Pendleton's No. 2 Cook B-84 was estimated as good for 100 bbls. at 1,348 55 feet; No. 3 Cook B-84 was estimated a 700 bbl. well at 1,331-51 feet; No. 11 Cook B-85 was good for 2,000 bbls. at 1,200-22 feet. The rig on this well burned shortly after it came in and the fire had to be put out with a battery of boilers. The test of Roeser & Pendleton and Marland Oil Co. in Section 81 was abandoned as dry at 3,000 feet. Tannehill Oil Co.'s No. 16 Moberly in the Tannehill Pool was plugged as a duster at 1,300 feet.

Stephens County

The Hickok Prod. Co.'s No. 2 Parks was shot with 30 quarts and produced 3 bbls. of oil and 1,000,000 feet of gas from sand at 3,089 129 feet, total depth being 3,134 feet. Meyer & Kramer's No. 1 G'asscock had a gas sand at 1,670-1,700 feet making 1,000,000 feet, but the well was still drilling at 1,750 feet. The Mook Texas Oil Co.'s No. 5 Head in Section 31, Blk. 6, T. & P. Survey was estimated a 10-bbl. well after a 30-quart shot in sand at 1,847-59 feet. It had another sand at 2,135 50 feet estimated good for 20 bbls. and this was to be shot. Roeser & Pendleton's No. 1 Rush was estimated a 50-bbl. well at 3,312 25 feet, total depth.

Throckmorton County

The Humble Oil & Refining Co.'s No. 2 Kirk Ledbetter, W. F. Bennett Survey, had dry sand at 778-82 feet and was abandoned at 890 feet. The Red Bank Oil Co.'s No. 1 Donnell and others was estimated a 4,000,000 foot gasser in sand at 823-27 feet. The rock pressure is 200 pounds. The Associated Petroleum Co.'s No. 3 Reynolds Cattle Co. was abandoned because they were unable to shut off water from above. Sand was encountered at 870-905 feet, total depth 950 feet.

Wichita County

Craig & Wilson's No. 1 Karrenbrock was dry and abandoned at 1,405 feet. O. C. Somers and others' No. 1 Morgan, C. T. R. R. Co. Survey No. 1, A-46, was dry and abandoned at 1,501 feet. Omohundro's No. 1 Chilson, Blk. 3, Margaret Ramsey Survey, A-471, was also a failure at 785 feet.

The Ascot Drilling Co.'s No. 5 Burnett was plugged as dry at 490 feet. Bullington, Lee & Pendleton's No. 4 Jennings B, Section 8, H. T. & B. Survey, A 475, missed the 1,800-foot sand and was abandoned at 1,975 feet. The Hereford Oil Co.'s No. 2 Allingham-A pumped 25 bbls. at 1,625-29 feet. It had sandy shale at 1,629-43 feet, total depth. Hooser's No. 3 Hines, Section 11, H. & G. N. Survey, pumped 50 bbls. at 1,390 94 feet. The Humble Oil & Refining Co.'s No. 2-B Hines-A, same section, was dry and plugged at 935 feet. The Ryan Petroleum Co.'s No. 83 Nance, Sam O. Fowler Survey, A-78, pumped 50 bbls. from sand at 503 20 feet; No. 74 pumped 45 bbls. at 1,293-1,323 feet; No. 75 also pumped 45 bbls. at 498-518 feet. The Texhoma Oil & Refining Co.'s No. 9 Burnett-E pumped 20 bbls the first 8 hours from sand at 1,559-79½ feet. The United Prod. Co.'s No. 6 Jennings-A, Section 12, H. T. & B. Survey, A-473, was dry and abandoned at 2,004 feet. The Virginia Oil Co.'s No. 1 Burnett was estimated a 5-bbl. well at 1,560-66 feet.

Wilbarger County

Beatty's No. 2 Waggoner in Section 36, Blk. B-2, was estimated good for 25 bbls. of oil and 20 bbls. of water from sand at 1,962-70½ feet. Bridwell & Heydrick's No. 12 Dill had broken oil sand and sandy lime at 2,289-2,315 feet and was cleaning out to test. The Empire Gas & Fuel Co 's No. 4 Richardson, an old well deepened, was good for 50 bbls. at 1,412 21 feet; No. 37 Stephens in Section 83, Blk. 14, had oil sand at 2,301-04 and lime at 2,304-05, and was cleaning out to test. The Humble Oil & Refining Co.'s No. 48-A Stephens, same section, swabbed 20 bbls. in 6 hours at 1,292-332 feet, total depth, 1,345 feet; No. 2 Waggoner K, Section 46, Blk. 2, pumped 20 bbls. at 2,339-44 feet; No. 12 Waggoner M, Section 42, Blk. 4, was estimated 60 bbls. on the pump from sand at 1,812-20 and 1,853-72 feet; No. 4 Waggoner-N, in Section 46, pumped 60 bbls. at 2,300-37 feet, total depth 2,338 feet. Lawson's No. 6 Bond was dry and abandoned at 2,075 feet. The location was abandoned for Lawson's No. 11 Waggoner. The Milham Corp.'s No. 2 Waggoner A was dry and abandoned at 2,546 feet; No. 1 Waggoner-B, Section 31, Blk. 4, an old well deepened, pumped 50 bbls. at 2,539-47 feet in lime; No. 4 Waggoner-B had oil sand at 2,542-54 feet and pumped 42 bbls.; No. 7 Waggoner H, Section 42, had sandy lime at 2,309-32 feet and pumped 185 bbls. It was an old well deepened and was making 80 bbls. previously. No. 10 Waggoner-H of the Milham Corp. had sand at 2,330-38½ feet, total depth 2,339 feet, and swabbed 145 bbls. It was likewise deepened from a 70-bbl. well. No. 5 Waggoner-L had oil sand at 1,864 68 feet and 1,870-78 feet, swabbing 100 bbls. in 17 hours. It was preparing to run tubing. No. 12 Waggoner-L swabbed 105 bbls. in 17 hours from sand at 1,890-911 feet and sandy lime at 1,915-22 feet.

The Phillips Petroleum Co.'s No. 7 Waggoner-D was plugged back from 2,805 to 2,350 feet and was cementing the 6-inch. It had saturated lime at 2,330-40 feet; No. 2 Waggoner-M was producing 4½ bbls., an old well deepened. It had water at 2,385 feet, total depth 2,409 feet.; No. 1 Waggoner-R was flowing 300 bbls. through tubing and packer from oil sand at 1,865-88 feet; No. 5 Waggoner-T swabbed 559 bbls. from oil sand at 1,861-84 feet, total depth 1,885 feet in shale; No. 1 Waggoner-U, an old well deepened, produced 40 bbls. from sandy lime at 2,292-314 feet and oil sand 2,415-19 feet. total depth 2,425 feet; No. 1 Waggoner Z was running 5-inch to test a showing at 1,868-74 feet; No. 2 Waggoner-HH swabbed 150 bbls. at 2,546-70 feet in lime; No. 2 Waggoner-PP had a showing at 1,935 38 feet and was cementing 8-inch; No. 8 Waggoner-QQ, cemented the 6-inch at 1,882 feet, total depth 1,884 feet; No. 9 Waggoner-QQ swabbed 201 bbls. from oil sand at 1,910-31 feet, total depth 1,933 feet; No. 10 Waggoner-QQ swabbed 200 bbls. from oil sand at 1,885-96 feet and sandy lime at 1,896-900 feet, total depth 1,904 feet; No. 1 Waggoner-WW swabbed 200 bbls from sand at 1,931-51 feet. All of these Phillips Petroleum Co. wells are in the Rock Crossing area. The Roxana Petroleum Corp.'s No. 1 Waggoner-C was dry and abandoned at 2,675 feet.

Young County

The Biljobul Oil Co.'s No. 1 Stewart has dry sand at 675-79 feet and was plugged at 705 feet. The Camp Oil & Gas Co.'s No. 1 Sanders was dry and abandoned at 1,002 feet, having found nothing in sand at 447½-49 feet. R. I. Carter's No. 14 Benson in Section 1,450, T. E. & L. Survey, was good for 15 bbls. at 917½-47 feet. Chenault & Lea's No. 5 Rachuig in Section 4, B. B. B. & C. Survey, pumped 80 bbls. at 1,159-63½ feet; No. 6 flowed and swabbed 400 bbls. at 1,156-67 feet and was being put on the pump. Hamilton & Martin's No. 3 Whitehead was a failure and plugged at 1,175 feet. It had dry sand at 885-907 feet. The Ilseng Prod. Co.'s No. 1 Speer in the Wm. Stoneham Survey, A 250, had no sand and was abandoned at 700 feet. Long and others' No. 1 Wilson bailed salt water at 881-89 feet and was plugged at 1,010 feet. The Magnolia Petroleum Co.'s No. 4 Little and others pumped 30 bbls. from sand at 1,277-88 feet. J. J. Moran's No. 1 Stewart in the D. Wilson Survey, A-76, had 100 feet of oil in the hole at 799-810 feet and was preparing to pump. The Pace Drilling Co.'s No 4 Bernhardt in Section 238, T. E. & L. Survey, swabbed 12 bbls. in 12 hours from sand at 1,019 32 feet and was shut down for orders. The Pandem Oil Corp.'s No. 2 Whitehead, Section 166, T. E. & L. Survey, pumped 50 bbls. at 867-75 feet; No. 3 bailed salt water at 865-68 feet and was plugged at 902 feet. Reed & Wooten's No. 1 Drum, in the L. W. Ross Survey, A-1,352, was dry and abandoned at 700 feet. It had dry sand at 630-38 feet. The Roberts Oil Corp.'s No. 6 Rogers in Section 166, T. E. & L. Survey, pumped 35 bbls. from sand at 852-69 feet. The Sun Oil Co.'s No. 6 Deitrich swabbed 100 bbls. in 24 hours from sand at 1,171 76 feet and was preparing to pump. The Tidal Oil Co.'s No. 1 Benson-B in Section 1,450, T. E. & L. Survey, pumped 20 bbls. at 913-42 feet.

PRODUCTION BY FIELDS
For Week Ending July 12, 1926

Electra

Atlantic Oil Prod. Co.	50
Empire Gas & Fuel Co.	640
Gulf Prod. Co.	1,029
Humble Oil & Refg. Co.	123
Magnolia Pet. Co.	3,450
Panhandle Refg. Co.	48
Phillips Pet. Co.	10
Prairie Oil & Gas Co.	120
Rio Bravo Oil Co.	591
The Texas Company	3,429
Texhoma Oil Refg. Co.	1,234
Miscellaneous	5,321
Total	16,045

Burkburnett

Gulf Prod. Co.	431
Humble Oil & Refg. Co.	369
Magnolia Pet. Co.	2,628
Panhandle Refg. Co.	207
Prairie Oil & Gas Co.	24
Sinclair Oil & Gas Co.	50
Skelly Oil Co.	159
Sun Oil Co.	60
The Texas Company	367
Texhoma Oil & Refg. Co.	548
Miscellaneous	7,354
Total	12,197

Iowa Park

Atlantic Oil Prod. Co.	62
Gulf Prod. Co.	120
Humble Oil & Refg. Co.	136
Magnolia Pet. Co.	351
Panhandle Refg. Co.	44
Roxana Pet. Corp.	4
Simms Oil Co.	10
The Texas Company	216
Texhoma Oil &eRefg. Co.	620
Miscellaneous	2,805
Total	4,368

Wilbarger

Atlantic Oil Prod. Co.	135
Empire Gas & Fuel Co.	940
Gulf Prod. Co.	71
Humble Oil & Refg. Co.	3,321
Phillips Pet. Co.	6,276

Prairie Oil & Gas Co.	204
Roxana Pet. Corp.	390
The Texas Company	26
Texhoma Oil & Refg. Co.	103
Tidal	10
Miscellaneous	4,118
Total	15,594
Archer	
Atlantic Oil Prod. Co.	367
Barnsdall Oil Co.	958
J. S. Cosden, Inc.	477
Empire Gas & Fuel Co.	582
Gulf Prod. Co.	2,826
Humble Oil & Refg. Co.	1,372
Independent Oil & Gas Co.	13
Magnolia Pet. Co.	1,544
Marland Oil Co.	516
Panhandle Refg. Co.	135
Phillips Pet. Co.	601
Prairie Oil & Gas Co.	2,092
Roxana Pet. Corp.	421
Simms Oil Co.	400
Sun Oil Co.	288
The Texas Company	2,943
Texhoma Oil & Refg. Co.	3,008
Tidal Oil Co.	31
Miscellaneous	12.452
Total	31,026
Young	
Atlantic Oil Prod. Co.	367
J. S. Cosden, Inc.	230
Gulf Prod. Co.	210
Humble Oil & Refg. Co.	304
Magnolia Pet. Co.	139
Marland Oil Co.	2
Panhandle Refg. Co.	138
Phillips Pet. Co.	15
Prairie Oil & Gas Co.	8
Roxana Pet. Corp.	131
Simms Oil Co.	615
Sinclair Oil & Gas Co.	360
Sun Oil Co.	199
The Texas Company	416
Texhoma Oil & Refg. Co.	282
Tidal Oil Co.	97
Miscellaneous	4,157
Total	7,670
Stephens	
Arkansas Fuel Oil Co.	30
Empire Gas & Fuel Co.	25
Gulf Prod. Co.	1,179
Humble Oil & Refg. Co.	660
Magnolia Pet. Co.	370
Mid-Kansas Oil & Gas Co.	1,520
Phillips Petroleum Co.	360
Prairie Oil & Gas Co.	775
Republic Prod. Co.	135
Roxana Petroleum Corp.	45
Simms Oil Co.	25
Sinclair Oil & Gas Co.	75
Sun Oil Co.	170
The Texas Company	975
Texas Pacific Coal & Oil Co.	1,225
Miscellaneous	4,390
Total	11,959
Shackelford	
Empire Gas & Fuel Co.	30
Humble Oil & Ref. Co.	1,100
Magnolia Petroleum Co.	50
Phillips Petroleum Co.	610
Prairie Oil & Gas Co.	10
The Texas Company	185
Texhoma Oil & Ref. Co.	75
Miscellaneous	7,760
Total	9,820
Ranger	
Arkansas Fuel Oil Co.	5
Gulf Prod. Co.	574
Humble Oil & Ref. Co.	60
Magnolia Petroleum Co.	550
Mid-Kansas Oil & Gas Co.	110
Panhandle Ref. Co.	125
Phillips Petroleum Co.	15
Prairie Oil & Gas Co.	555
Republic Prod. Co.	45
Simms Oil Co.	25
Sinclair Oil & Gas Co.	310
The Texas Company	160
Texas Pacific Coal & Oil Co.	780
Transcontinental Oil Co.	30
Miscellaneous	2,425
Total	5,769
Eastland-Comanche	
Empire Gas & Fuel Co.	5
Humble Oil & Ref. Co.	85
Magnolia Petroleum Co.	595
Mid-Kansas Oil & Gas Co.	140
Phillips Petroleum Co.	35
Prairie Oil & Gas Co.	85
Sinclair Oil & Gas Co.	20
Skelly Oil Co.	135
The Texas Company	110
Transcontinental Oil Co.	25
Miscellaneous	665
Total	1,900
Brown	
Cosden Co.	475
Humble Oil & Ref. Co.	2,175
Phillips Petroleum Co.	150
Prairie Oil & Gas Co.	735
Simms Oil Co.	30
The Texas Company	390
Witherspoon Oil Co.	30
Miscellaneous	4,580
Total	8,565
Callahan	
Humble Oil & Ref. Co.	2
Prairie Oil & Gas Co.	725
The Texas Company	185
Texas Pacific Coal & Oil Co.	25
Witherspoon Oil Co.	2
Miscellaneous	3,050
Total	3,989
Miscellaneous Pools	
Reagan County	30,302
Clay County	529
Montague County	4,566
Jack County	119
Throckmorton County	498
Baylor County	123
Palo Pinto County	425
Coleman County	1,350
Scurry County	52
Mitchell County	3,402
Crockett County	951
Upton County	3,336
Howard County	44
Crane	238
Total	45,935
Panhandle	
Carson County	2,439
Hutchinson County	48,889
Wheeler County	335
Gray County	2,961
Potter County	30
Total	54,654
Grand total	229,491

RATES ON EQUIPMENT BASIS FOR COMPLAINT

SHREVEPORT, La., July 19.—Complaints filed by the Standard Pipe Line Co. against various railroads operating in Louisiana and Arkansas charged with maintaining unreasonable freight rates on equipment from the East to this territory, were heard last week by W. S. Carney, examiner for the Interstate Commerce Commission. The pipeline company alleges the rates on boilers, heaters, engines and equipment from the Pittsburgh territory to this district are discriminatory.

The Standard asks for a readjustment of rates for future shipments and that reparation be granted on shipments already moved. The hearing was completed July 10 and the report is to be forwarded to the Interstate Commerce Commission.

MARLAND MAY DRILL ON HUDSON BAY LAND

NEW YORK, July 17.—E. W. Marland, president of the Marland Oil Co., is reported to have arranged with the Hudson's Bay Co. in London for extensive oil explorations and developments on the latter company's properties in Canada.

At the offices of J. P. Morgan & Co., who are largely interested in the Marland Oil Co., it was said that no information as to such a contract had been received from Mr. Marland. The report, however, was supported by information received in the financial district that some kind of an arrangement had been made.

It is understood that a new company will be organized under the laws of Canada to be known as the Hudson's Bay-Marland Oil Co. and that operations will commence after geological surveys.

The Hudson's Bay Co. owns vast properties throughout Canada and much of its land is reported to be rich in oil possibilities.

ALBERTA OIL DECISION

CHATHAM, Ont., July 27.—The appellate division of the Supreme Court of Alberta recently sustained the right of a company incorporated under Dominion charter to sell shares in Alberta without a certificate from the provincial utilities board. The decision was given in a test case instituted by the attorney general of Alberta against the Dallas Oil Co. The Supreme Court decision will be appealed by the province direct to the Privy Council. The final appeal will likely be decided in London, England, in October.

NEW ROAD TO AMARILLO

AUSTIN, Tex., July 17.—An amendment to the charter of the Chicago, Rock Island & Pacific Railway Co. for the construction of a branch line from Amarillo to the Oklahoma line through Potter, Carson, Hutchinson and Hansford Counties, was granted by the Secretary of State. The line will traverse the Panhandle oil fields. From Texas it will cross the Oklahoma Panhandle to connect with the Rock Island line entering Liberal, Kans. The Texas part will be 104 miles long.

JAMES C. EWING DIES

WASHINGTON, Pa., July 17.—James C. Ewing aged 66 years, member of the Washington bar and former associate of the late M. C. Treat, oil and gas operator, died at his home here after an illness of two weeks.

DEEPEST ELECTRICALLY DRILLED WELL PASSING 7,476-FOOT LEVEL

By George W. H. Reid

LOS ANGELES, Calif., July 17.—The Chanslor-Canfield Midway Oil Co., having previously made a world's record in deep drilling with electrical power methods, when it drilled the Francis well on Western Avenue, in the Torrance district to a depth of 6,600 feet, is now employing similar methods in deep testing the Olinda area, northeast of Brea.

The Olinda area, it will be recalled, is one of the oldest producing fields in the Los Angeles Basin. This area was in fact the first field of importance to be opened in southern California. The first of the old Puente wells produced oil at 150 feet in 1880. The district has borne many names—sometimes being termed as the Brea-Olinda fields, but late reports carry the entire district lying along the lower reaches of Brea Canyon and the hills to the east, as the Fullerton Field. The deep test of the Chanslor-Canfield Midway Oil Co., regardless of the native of colloquial nomenclature, is in Section 8-3s-9w, San Bernardino Basin and Meridian, the derricks, 122 feet in height, being located at the top of one of the numerous hills which are characteristic of the Olinda district. The well, No. 96 C. C. M. O. C., is virtually in the center of the producing area.

The test is being conducted for the purpose of gathering geological information concerning the Olinda district and with the hope of securing production from any deep sand discovered by the exploration. At the same time the company is securing data as to the cost, and economic practicability of drilling deep tests with electrically driven rotary drilling equipment. Incidentally, it is hoped that the world's record for deep testing may be broken. To do this will involve drilling below 7,591 feet, which is the depth of E. J. Miley's Athens No. 6 producer, which is the world's deepest rotary drilled well, using steam power. As 7,756 feet is the deepest standard tool drilled well, at Kelly's Hollow, near Ligonier, Pa., by Peoples Gas Co., the C. C. M. O. Co. will necessarily have to drill below that level to carry off these honors.

At the time of the writer's visit the well had reached the low level of 7,323 feet, Monday, June 28. Tuesday, June 29, its depth was reported as 7,364 feet. Wednesday, June 30, 7,394 feet; Thursday, July 1, 7,422 feet. At this depth the equipment held the world's record for deep drilling with rotary, driven by electrical power units. At last report it was at 7,476 feet.

The electricity for power purposes is brought in through high tension lines and reduced to 440 volts for power use. As Westinghouse 100 horse power type C. W. induction motor supplies power for drilling, employing an Ideal reduction gear. The heavy chain driven rotary used is a No. 5 Ideal. Three speed draw works are installed. The electrically driven mud hogs, mud pumps, are also Ideal, 12 by 6¾ by 12-inch. Two pumps are installed, both driven by 50 horse power Westinghouse motors.

The first half of well No. 96 (C. C. M. O. Co.) at Olinda was drilled with fishtail bits. Between 3,400 and 3,500 feet, where production is usually found in this area, the company passed up production, and changed to rock bits. At the depth of 7,200 feet this well was surveyed by Alexander Anderson, who prepared a glass and wood model of the well, which is placed in the company's Los Angeles office for inspection. This survey and model shows that the hole has done considerable drifting, having outlined two long sides of an acute triangle.

Drilling ahead carefully the crew makes a round trip about once every seven hours, using every precaution to avoid a fishing job. Upon completion of the test, if the hole develops dry, the company plans to back off to the pay sand at about 3,400 feet and bring the well in as a producer at that level.

The deep test at Olinda is attracting lots of attention, from the standpoint of possible production, as well as the keen interest in the possibility of going deeper with this type of equipment than the standard tool deepest well.

Deep drilling in California has not been extensive with standard tools, but western operators lay claim to several deep holes drilled by rotary equipment. The electrically powered rotary drilling record is now of interest for many companies are turning to electric boring units throughout the state.

The following table is a record of the state's deepest rotary drilled holes:

E. J. Miley's No. 6 Athens, 7,591 feet, Athens, rotary; Union Oil Co.'s No. 1 Gardena, 7,319 feet, Dominguez Hill, rotary; Standard Oil Co.'s Brownrigg-Kellar, 7,212 feet, Santa Fe Springs, rotary; Pacific Oil Co.'s No. 1 Baldwin, 6,757 feet, Baldwin Hills, rotary; General Petroleum Co.'s No. 1 Amestoy, 6,666 feet, Athens, rotary; Associated Oil Co.'s No. 2 McNally, 6,018 feet, West Coyote Hills, rotary; Chanslor-Canfield Midway Oil Co.'s Francis, 6,600 feet, Western Avenue, Torrance, electric power rotary; C. C. M. O. Co.'s No. 96, 7,476 feet, Olinda, still drilling, electric power rotary.

NEW JERSEY COMPANY'S FIRST COLOMBIA OIL

NEW YORK, July 17.—The Standard Oil Co. of New Jersey has received the first cargo of crude oil under a new arrangement with the International Petroleum Co., a subsidiary, whose production in Colombia eventually will augment the Standard's by 20,000 to 30,000 bbls. a day. The tanker, T. J. Williams began discharging its cargo of 90,000 bbls.

Regular shipments are made possible by the recent completion of the 400-mile pipeline from the International's holdings at Barranca, Bermeja, to the coast at Cartagena, Colombia. The carrier was built by the Andian National Corp. and is capable of handling 35,000 bbls. a day through its eight stations. The International Petroleum Co. has a 15-year contract with the Andian National Corp. for the use of the pipeline.

FUEL OIL CONSUMED BY PUBLIC UTILITIES

Electric public utility power plants consumed 632,878 bbls. of fuel oil during May, according to the monthly report just announced by the power resource division of the United States Geological Survey. This represented a decrease of 15,645 bbls., or 2.4 per cent from the consumption during April.

Coal burned by these plants also showed a decrease amounting to 1.5 per cent but in contrast to this the use of natural gas increased 6.7 per cent.

Comparing May, 1926, with May, 1925, oil was the only fuel, consumption of which by these power plants declined. The daily average consumption of fuel oil during May was 20,400 bbls., a decrease of 1,400 bbls., or 6.4 per cent from that of May, 1925. The use of coal increased 3.9 per cent and natural gas 8.1 per cent.

FRED PARKS KILLED

ARDMORE, Okla., July 20.—Fred S. Parks, oil field scout for the Sinclair Crude Oil Purchasing Co., of Tulsa, Okla., was killed when an airplane piloted by Walter Critchlow, an oil producer of this city, crashed to the ground near here from an altitude of 2,000 feet. Mr. Parks was born in Oklahoma 24 years ago, and for the past five years has been employed as a scout by the Mid-Continent Petroleum Corp. and the Sinclair company. He was educated in Oklahoma University, and was very well known in Oklahoma oil circles.

TEXAS PANHANDLE

(Continued from Page 40)

5,600 bbls. daily for the week. The Westex Oil Co.'s three producers were not far behind with an aggregate of 3,300 bbls. daily.

DAILY AVERAGE PRODUCTION OF THE AMARILLO DISTRICT

Hutchinson County

Company—	Wells	Daily Avg.
Amerada Pet. Corp., J. A. Whittenburg	1	65
Amerada Pet. Corp., G. A. Whittenburg	1	45
American Refining Co.	1	115
Apex Oil Co.	1	225
Badger Oil Co.	1	30
R. C. Barnum	1	30
Canadian River Oil Co.	4	370
Canyon Oil & Gas Co.	2	4,550
Centerfield Oil Co.	1	0
Coble-Whittenburg Oil Co.	2	725
Currie Bros. & J. R. Phillips	1	2,160
Cockrell-McIlroy Oil Co.	2	1,525
Derby Oil Co.	1	485
Devonian Oil Co.	1	40
Dixon Creek Oil Co.	14	8,750
Double Five Oil Co.	1	90
Douglas Oil Co. & Cline	1	15
Dunnigan and others	1	350
Fly-Blackburn Oil Co.	1	210
Gates Oil Co.	4	325
Golding & Phillips	1	10
Gulf Prod. Co. & Panhandle	10	2,005
Gulf Production Co.	4	905
Gulf Prod. Co., Fee	1	180
Heywood and others	1	0
J. K. Hughes Development Co.	4	525
Holmes, Currie & McKnight	1	245
W. H. Holmes	1	260
J. H. Lennix	1	10
Lennix & Patterson	1	1,500
Lucky Ten Oil Co.	1	150
Marland Oil Co.	1	10
Midwest Exploration Co. et al.	3	500
McMan Oil & Gas Co.	5	1,800
McIlroy & Herring	2	200
S. D. and W. W. McIroy	2	200
McIlroy Bros. et al.	2	500
J. H. Middleton	3	60
Newby Oil Co.	1	40
New Domain Oil Co.-Borton	1	25
New Domain Oil Co.-Kingsland	1	0
Phillips & Heywood	1	0
J. R. Phillips-Weatherly	1	30
Phillips Pet.-Barnum	1	85
Phillips Pet.-Coble	7	3,840
Phillips Pet.-Finklea	1	625
Phillips Pet.-Gibson (Sec. 62)	2	235
Phillips Pet.-Gibson (Sec. 63)	1	250
Phillips Pet.-McMillan	1	360
Phillips Pet. (was Gibson Oil) Kingsland	1	135
Phillips Pet.-Jerry	2	5,600
Phillips Pet.-Whittenburg	2	75
Phillips Pet.-et al.	1	550
Phillips Pet.-Huff	1	470
Phillips Pet.-Pulaski	1	75
Phillips Pet.-Smith et al.	4	575
Phillips Pet.-Smith et al (Sec. 12)	1	105
Phillips Pet.-J. A. Whittenburg	1	315
Prairie-Weatherly	2	130
Prairie-Johnson Bros.	1	0
Relief Oil Co.	2	790
Riley-Holmes	1	800
Roxana (Sec. 14)	3	1,810
Roxana (Sec. 11)	3	1,100
Ryan Pet. Corp.	2	150
Skelly Oil Co.-Whittenburg	3	160
Skelly Oil Co.-Powell	1	35
Skelly-Cunningham	2	520
Skiatex Oil Co.	3	460
J. L. Smith	1	100
Smith & Bynum	1	400
Spring Creek Oil Co.	1	150
Summit Oil Co.	2	525
Sunny Jim Oil Co.	3	520
Travelers Oil Co.	2	600
J. D. Ward	1	50
J. D. Ward et al (Snell)	1	300
Westex Oil Co.	3	3,300
White Eagle O. & R.-Johnson	1	725
White Eagle O. & R.-Smith	3	550
White Eagle O. & R.-Whittenburg	1	30
J. O. Whittington	1	0
Total Hutchinson County	162	56,010
Average per well		346
Average per well last week		335

Carson County

Amarillo Oil Co.	1	0
American Refining Co.	4	530
Gates Oil Corp.	1	10
Gulf Production Co.	9	240
Marland Oil Co.	7	1,170
W. W. Slik et al	2	80
Skelly Oil Co.	2	65
Sunny Jim Oil Co.	2	50
The Texas Co.-M. C. Burnett	3	90
The Texas Co.-S. B. Burnett	6	75
Total Carson County	37	2,310
Average per well		64
Average per well last week		66

Gray County

Shamrock Petroleum Co.	2	70
Wilcox-Pampa Oil Co., Worley & Reynolds	3	2,550
Wilcox-Pampa Oil Co., Combs & Worley	1	20
The Texas Company	1	20
Empire Gas & Fuel Co.	1	10
Total Gray County	8	2,670
Average per well		325
Average per well last week		370

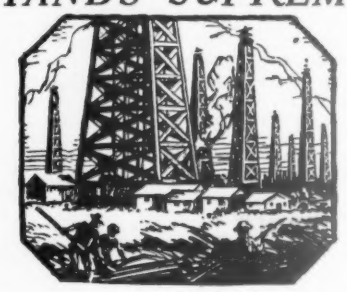
Potter County

Amarillo Oil Co.	1	25

Wheeler County

Gibson Oil Corp.	2	190
Continental Oil Co.	1	0
Midwest Exploration Co.	3	20
Uphan Gas Co.	1	0
Total Wheeler County	7	210
Average per well		30
Average per well last week		48
Grand total Panhandle	215	61,235
Average per well		285
Average per well last week		274

ASCO STEEL
STANDS SUPREME



Every step in the production of Asco Steel is watched closely. From the selection of the raw materials to the finished product, the first thought always is to produce a steel that will give the best results to the makers of Oil Well Tools. Can we help you to produce better tools?

DISTRICT OFFICE:
502 Cosden Bldg., Tulsa, Okla.

THE ANDREWS STEEL CO.
NEWPORT KENTUCKY

TEXAS PANHANDLE WILDCATS

Dallam County

James and others' No. 1 fee, drilling at 2,650 feet in slate.

Gray County

Bay Shore Petroleum Co.'s No. 1 C. W. Bradford, shut down for 12-inch at 943 feet. Blackwell & McGee's No. 1 Bowers, location. Canyon Oil & Gas Co.'s No. 1 Jackson estate, new location. Constantin and others' No. 1 Dial, rigging up rotary. Cranfill Brothers' No. 1 T. B. Noble, building rig. Eagle Creek Oil Co.'s No. 1 Mrs. J. Hopkins, building rig. Empire Gas & Fuel Co.'s No. 1 Benton, rig; No. 1 B. Hughey, spudding at 100 feet; No. 1 J. J. Wall, rigging up; No. 1 P. A. Worley, spudding at 50 feet. Jack Greenwood and others' No. 1 H. B. Lovett, moving in tools. Haughn and others' No. 1 A. J. Dauer, new location. Nabob Oil Co.'s No. 1 J. S. Morse, spudded and shut down. Shamrock Petroleum Co.'s No. 2 Merten was drilling at 1,510 feet; No. 1 Worley & Reynolds was drilling at 2,833 feet, having had 5,000,000 feet of gas at 2,667-83 feet. Wilcox Oil & Gas Co.'s No. 4 Worley & Reynolds was drilling at 2,100 feet, and No. 6 at 2,020 feet. Young and others' No. 1-A Holmes was spudding at 50 feet.

Hansford County

F. W. Dillard and others' No. 1 F. A. Davis had a rig up.

Hartley County

Deep Rock Oil Co.'s No. 1 Lyman & Balfour was drilling at 780 feet. Eslick and others' No. 1 J. B. Irving was rigging up. W. H. Holmes' No. 1 G. B. Coots was spudding at 200 feet. Humble Oil & Refining Co.'s No. 1 J. M. Shelton was a rig. J. E. McKanna's No. 1 E. S. Collins had a rig up; No. 1 Francis Farwell and others also had a rig up, and so did No. 1 J. M. Shelton estate. Nutigate's No. 1 J. M. Shelton estate was a location.

Hemphill County

Hoover and others' No. 1 Schaller estate was fishing for tools at 150 feet.

Hutchinson County

Lee Flowers and Marland Oil Co.'s No. 1 Carver was shut down at 400 feet with engine trouble. Get Oil Co.'s No. 1 W. F. Allen had a rig up. Gibson Oil Corp.'s No. 1 McCormick estate was drilling at 1,000 feet. Inspiration Oil Co.'s No. 1 Erle Thompson was drilling in cavey shale at 2,170 feet. Western Development Co.'s No. 1 O. W. Jarvis, total depth 1,800 feet, had sidetracked a crooked hole and was drilling at 1,200 feet.

Lipscomb County

Snyder and others' No. 1 A. Barton was drilling at 750 feet.

Moore County

Amarillo Oil Co.'s No. 1 Masterson-J was drilling at 510 feet; No. 2 Terry Thompson was drilling at 650 feet. Cadman and others' No. 1 J. T. Sneed, Jr., was drilling at 1,015 feet. Clark, Harbin & Baldridge's No. 1 O. E. Gober had a rig up. Douglas Oil Co. made a new location for No. 1 H. E. Beauchamp. Lee Flowers and Marland Oil Co.'s No. 1 J. T. Sneed, Jr., was shut down at 560 feet. Phillips Petroleum Co.'s No. 1 Sneed had a very slight show of oil at 2,874 feet and 100,000 feet of gas at 2,877 feet and was drilling ahead at 2,882 feet. Morton & Co.'s No. 1 H. C. Rubert is a rig. Prairie Oil & Gas Co.'s No. 2 Sneed was drilling at 1,080 feet.

Ochiltree County

W. G. Burton's No. 1 Strickler was drilling at 450 feet. McCorkle Pipe Line Co.'s (was Harris & Schaffer's) No. 1 R. H. Moore was spudding at 50 feet. Standard Development Co.'s No. 1 Bowen was spudded and shut down while a water well is being drilled.

Potter County

Amarillo Oil Co.'s No. 5 Lee Bivins-A has a rig up. Farmers Oil & Gas Co.'s No. 1 J. A. Jones also is a rig. Gulf Production Co.'s No. 1 W. H. Bush is drilling at 680 feet.

Roberts County

Gibson Oil Corp.'s No. 1 T. S. Jones was spudding.

Sherman County

Eclipse Drilling Co.'s No. 1 Lee Bivins was rigged up. Get Oil Co.'s No. 1 Bivins had a rig in place and so did the Savoy Oil Co.'s No. 1 C. Roach. It was shut down drilling a water well. Skelly & Downing and others' No. 1 Hargrove was a location.

Wheeler County

Gibson Oil Corp.'s No. 1 W. E. Bentley was drilling at 430 feet; No. 2 H. C. Phillips was a rig. Mid-Kansas Oil & Gas Co.'s No. 1 W. C. Compary is a new location. Midwest Exploration Co.'s No. 1 Shelton was recementing 8-inch casing at 2,032 feet. Murchison & Fain's No. 1 Bunkley & Cain was building rig; No. 1 Bunkley & Cain-A is a location; No. 1 Close is a new location, first report. Scott & Barner's No. 1 J. H. Jackson was drilling at 312 feet. Smith and others' No. 1 W. J. Johnson is a location. Smith, Brady and others' No. 1 P. J. Sorenson was spudded 50 feet and shut down. Upham Gas Co.'s No. 1 Cody is a location; No. 1 fee is drilling at 1,995 feet, with 15,000,000 feet of gas at 1,880-95 feet. E. L. Woodley, Jr.'s No. 1 Woodley, Sr. was shut down at 660 feet.

Collingsworth County

Gibson Oil Corp.'s No. 1 Williams and others, drilling at 445 feet.

First Reports

Hutchinson County

The Get Oil Co.'s No. 1 W. F. Allen, 9,833 feet south and 8,823 feet east of NW cor. Jose De Jesus Rodriguez Survey, rig. Amerada Petroleum Corp.'s No. 2 J. A. Whittenburg-A, 330 feet south and east NW cor. Section 21, Block 47, H. & T. C. Survey, cellar. Barnsdall Oil Corp.'s No. 1 E. J. Pritchard, C SW NE, Section 3, Block B-4, D. & S. E. Survey. Goldelline Oil Corp.'s No. 1 J. A. Whittenburg-H, 330 feet north and west SE cor. N half SE, Section 15, Block X02, B. S. & F. Survey, rig on ground. S. D. & W. W. McIlroy's No. 5 Smith, 330 feet north and east SW cor. north half NW, Section 14, Block Y, M. & C. Survey, building rig; No. 6 Smith, 330 feet north and 990 feet east SW cor. N half NW, Section 14, Block Y, building rig. McMan Oil & Gas Co.'s No. 2 Johnson Brothers (Gray), 330 feet south and east NW cor. SE NE, Section 21, Block Y, A. & B. Survey, building rig; No. 7 Smith, 330 feet south and east NW cor. NW NE, Section 5, Block Y, M. & C. Survey; No. 3 Johnson-Ray Wheatley, 990 feet west and 330 feet south NE cor. south 80, north 240, Section 66, Block 46, H. & T. C. Survey; No. 4 Johnson-Ray Wheatley, 990 feet east and 330 feet south NW cor. south 80, north 240, same section, rig. Summit Oil Co.'s No. 3 J. A. Whittenburg, 330 feet south and west NE cor. SE SW, Section 13, Block Y, M. & C. Survey, building rig.

Hartley County

J. E. McKanna's No. 1 France Farwell and others' C SW, Section 30, Block 22, C. S. S. Survey, rig on ground; No. 1 J. M. Shelton Estate, 330 feet south and E NW cor. League 202, Capitol Lands, rig on ground. Nutigate's No. 1 J. M. Shelton, center Section 1, Block L-E, E. L. & R. R. Survey.

Sherman County

H. Skelly, Downey and others' No. 1 Hargrove, center north half Section 2, Block 1, T. T. & N. L. R. R. Survey.

LEGAL

NOTICE

The undersigned will sell at public auction the property hereinafter described as follows:

One 28 Star drilling machine complete with
28-h.p. Boiler
23-h.p. Engine
Generator complete and all tools,

at the F. H. Taylor farm, in 3-16-16, near Red Bird, in Wagoner County, Oklahoma, on July 28, 1926, at 10 o'clock, A. M.

One complete drilling outfit consisting of
28-h.p. Boiler
30-h.p. Engine
Belt, stems, ballers, bits, elevator, casing blocks, generator, all tools and accessories,

at Pipps Brothers' property, in Beggs, Oklahoma, on July 31, 1926, at 10 o'clock A. M.

L. R. KERSHAW, Receiver of the Muskogee-Security National Bank.

J. W. STEEN, Special Master, Muskogee, Okla.

FERD P. SNIDER, Atty., Muskogee, Okla.

Handling Gas With Flush Production

Interests of Natural Gasoline Manufacturer and Producer Require Careful Operation of Gathering System

By Frank P. Peterson

Operation forces should be prepared to take charge of all field connections as soon as completed up to the gas collecting points. The amazing fact is that where we once said the ideal condition for operation would embrace a group of old, settled casingheads, we now say the field is open the moment a wildcat hole taps a good sand and the ideal condition is one of flush production—the bigger the better. And here we find, as a pool enters its aggressive state of development, every condition usually from a bradenhead under hundreds of pounds pressure to a light flow tank which cannot be subjected to four ounces pressure. Cromwell, for instance called for the gathering and handling of a range of conditions presenting, on the one extreme a well of two or three thousand cubic feet of five gallon gas at no well pressure and on the other, a well capable of delivering twenty million feet daily of 0.5 gallon gas at a pressure above 250 pounds per square inch.

Operation Forces

Operation forces must come prepared to get all these wide ranging field conditions into hand and handle them. The last named condition would, of course, call for altogether special treatment. Aside from suggestion of a battery of field absorbers, their complement of absorbent oil circulation lines, pumps and equipment of high pressure type, the delivery of residue gas to commercial lines, etc., it will not be of essential interest to go into this particular angle, notwithstanding it is likely to arise for treatment at any moment and operation must be prepared to step in and take it over.

Preliminary and all subsequent estimates and surveys of gas resources to be dealt with should be turned over to operating forces. Conditions are such that the operators will have to select and order the placing of all meter and pressure control equipment. And, with regard to the capacity and control functions of the material so placed, much of it will be transitory. Each lease or royalty subdivision to be connected will be subjected to survey by the field test force and, on that finding immediately preceding the actual connection of service lines, proper equipment will be selected and installed. Construction forces will have gone ahead to the extent, usually, of constructing meter loops in blank, and to stub ends of lines at wells, at separators and at oil flow and sometimes stock tanks.

The last mentioned detail, stock tanks, is of sufficient importance in fields of light oil that it should not be neglected. The technic of meter setting is special. Modern day meters are wholly of the orifice type. To the lasting credit of equipment makers they place the necessary data in the meter man's hands for the solution of his problems. Each oil producer will be consulted always, if any change in existing gas pressure in or against his oil wells might be brought about by the gathering of his gas. Oftentimes slight variances will be brought about unless special provision is made to avoid such a result. The producer usually welcomes any reduction of gas pressure that may be brought about, but the exception is by no means rare. Ordinarily his existing conditions are easily duplicated, and where wells are producing liberal output of oil and gas, it is now thought best not to reduce materially the natural pressures at which they are wont to flow. In fact it is not possible, of course, to reduce the well pressure below that which exists at the casinghead. It is possible, where lead or flow lines of insufficient capacity are in use to make pressure reductions in the well or at its head, and operative forces are often qualified to make suggestions in this direction, but the oil producer's judgment is first, last and final in this detail.

Example of Conditions.

An example is roughly indicated in Figure 1 of the conditions that may and will be in most cases common to the routine of early operation: At A a small well will be found, producing a light volume of good gas, possibly an old well, or an edge producer, which must be encouraged to give up as much volume as possible. Therefore, the pressure in it must be relieved as completely as possible. Gas connection will be made at its casinghead and, in order that no appreciable pressure whatever may be imposed upon it, an ordinary light check valve, R-1, will be set after the connection to main system and, further along, to prevent back-flow in wide fluctuations of pressure in the main system, a check will be interposed between the well and the next incoming connection to main gas gathering line. Over at B, a vigorous flowing well will be encountered which is delivering its output, oil and gas to the separator, S, where the oil is trapped out to the tank, T, and the gas separated under conditions which may involve a range of pressures all the way from nothing (gauge) to fifty or more pounds.

SECOND ARTICLE

This article is the second of a series by Frank P. Peterson on the operation of natural gasoline plants. The first article which dealt with personnel and gathering lines appeared in the July 8 issue of The Oil and Gas Journal.

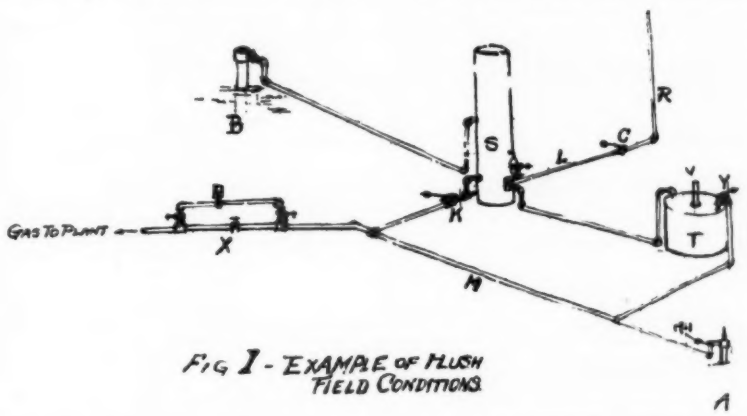


FIG 1 - EXAMPLE OF FLUSH FIELD CONDITIONS

Prior to operation, the lease forces will have provided for release of the gas from this separator through the line, L, the back pressure valve, C, and the atmospheric vent, R. The main line, M, will have been placed with its proper opening for connection to the separator by plant field construction forces. Operation will select a proper regulator, K, and direct its setting, whereby the gas under normal conditions may be directed to plant through the regulator, K, and the further escape of gas to atmosphere from the well, B, will be stopped except at such momentary periods of violent flow as may exceed all reasonable ranges of line capacity.

From the separator, S, the oil will carry entrained with it to stock tank, T, some gas and on reaching this tank, which is open or practically so, there will be released not only the gas so entrained, but some light oil vapors most desirable to collect. And while the volume of such vapor may be small, its value will be high to operation because it is a staple product and can tie down its complement of putane condensate, which is a less stable gas product, and blend out thereby a gain in plant production not otherwise available. These tanks, especially if they are of the older type, will sometimes be so light as to withstand less than four ounces pressure per square inch. Operation must select a regulator, Y, therefore, which will function positively to prevent any accumulation of pressure in tank, T, and at the same time close the line communication with the tank if the pressure therein approaches atmospheric. These tanks usually have a vent, V, in their tops, or the equivalent in an open line conducted some little distance away, and ending in a riser similar to that provided for separator, S, but with no check or pressure valve interposed. A simple expedient is to lay a lightly weighted clapper plate, faced on its bottom surface with old belting fabric over the top of the tank vent opening. The weight per square inch of area of this clapper must be kept down to an ounce or such a matter, else a balloon will be made of tank, T, and its further useful life will be ended.

Such precaution serves also to safeguard plant from a "dose of air," if the sensitive valve, Y, fails by any chance to function as it should.

Type of Valves

Valves, however, of sufficient sensitiveness are available and they pay for themselves quite definitely enough, and they are especially effective in summer time when the release of oil vapors is at its maximum. Through such lines of equipment as are now used, the days of wastage from evaporation are about over and the consumer must rest assured that the clamor about oil field wastes is largely fiction. At X, the meter loop will have been placed to serve the least or royalty division involved. Operation will take account of the volume of gas to be gathered and accounted for here. Assuming that the loop and sub-main division will have been laid of pipe of ample size for the requirement, it will now be necessary only to set in the meter flanges and select an orifice to take care of the present measured or estimated quantity of gas. It is often the case that anything like accurate measurement is difficult to obtain. Of course all the known methods are applied in the effort. An orifice well tester will be used on the small and medium sized wells. Where access can be had at all, pitot tube measurement will be applied on the large volumes. But conditions will be numerous enough where no definite measurements can be made, and here the value of experience will be most evident on the part of the field test man, who by visual inspection and the noise made by escaping volumes of gas through known sizes of pipe, etc., can report closely enough to direct the selection of a proper sized orifice plate. This is done surprisingly often. When a mistake is made, it is not a serious matter to make the change in orifices required.

Selection of Plate

Given the quantity of gas estimated or measured for meter settings, (and this is a 24-hour volume), the meter man will refer to his data and select a plate the hourly coefficient of which will fit the case. Some latitude is also exercised in selection of the instruments used in recording the functions of meter operation and their reduction to record of the gas volumes to be determined. If large volumes may be handled under considerable pressure, an instrument may be used having a differential and pressure range to suit, but careful judgment here also will avoid the necessity of future changes in the setting of instruments.

Use of Handbooks

Reference to handbooks and trade publications supplied by orifice meter makers will disclose all the data needed, and the published data of the Metric Metal Works, credit for which is originally due H. P. Westcott and H. N. Greis, is especially useful. It is not necessary to describe the instrument equipment and yet it may not be amiss to outline the procedure.

Assume a condition where a measured or estimated volume of 700,000 feet of gas is to be metered at a flowing pressure of not to exceed 5 pounds gauge. That a differential range not to exceed 20 feet water column will prevail, and that a 6-foot pipe line and orifice meter will be used; what size orifice will be inserted in the flange?

In the trade bulletins, catalogs and handbooks treating the subject, will be found tables of hourly coefficients for orifice plates. These are given for a set of orifice sizes for a given pipe size and for recording instrument connections directly to the orifice flanges and also at 2½ and 8 pipe diameters (up and down stream respectively), from the flanges. Let us use the direct connection coefficient factor.

Other factors applied as corrections must be used.

Variances in specific gravity call for corrections. If the gas record is to be kept corrected to a standard basis of temperature (60 degrees Fahrenheit is the standard), this will call for a correction, but usually it may be neglected in the placing of an orifice in service. A single factor, which is $\sqrt{\text{h.p.}}$ may be used for these two governing conditions and, if this be $\sqrt{20\times19.4}$ or for h, 4.472 and for p, 4.405, or $4.472\times4.405=19.6989$, or, closely enough for practical use, 19.7.

Let us assume a 0.900 specific gravity. Reference to tables of correction to a base specific gravity of 0.600 (which are computed from the formula

$$\sqrt{\frac{0.60}{\text{Actual Sp. Gr. indicated}}}$$

will give for gravity correction a factor, 0.8165. Combining the latter with the above, we have $19.7\times0.8165=16.087$.

Now we require to handle 700,000 cubic feet per 24 hours and since the orifice coefficients are given in hourly periods, we shall find the orifice required thus:

$$\frac{700{,}000}{24\times16.087}=1813,$$

and 1813 is about the range of the coefficient that will need to be applied. Referring to the tables above mentioned, in

STEEL
for Immediate Shipment from Stock
Bars, Plates, Rivets, Tool Steel, Shapes, Sheets, Bolts, Welding Rods, Structurals, Tubes, Wire, Concrete Reinforcing, Rails, Pipe, Turnbuckles, Small Tools, Machine Tools, Etc.
Write for Ryerson Journal and Stock List
JOSEPH T. RYERSON & SON INC.
CHICAGO ST. LOUIS CINCINNATI
TULSA OFFICE—418 ATLAS LIFE BLDG.
DETROIT BUFFALO NEW YORK

INSPECTION—TESTS—CONSULTATION
Inspection and testing at mills of pipe and casing.
Inspection of fabrication of oil storage tanks and structures.
Resident Inspectors at Pipe and Steel Mills
Chemical Cement and Physical Testing Laboratories
ROBERT W. HUNT CO.
ENGINEERS
Dallas Pittsburgh
CHICAGO
New York San Francisco St. Louis

ROSS-MEEHAN FOUNDRIES
Manufacturers
Electric Steel Castings, Certified Malleable
Iron Castings, and Gray Iron Castings
For
Oil Producers and Refineries
"Meehanite Metal" Castings
River Clamps a Specialty
CHATTANOOGA, TENNESSEE, U. S. A.

CARBON (BLACK DIAMONDS)
FOR DIAMOND CORE DRILLS
IMPORTERS
INDUSTRIAL DIAMONDS
MANUFACTURERS
DIAMOND POINTED TOOLS FOR ALL MECHANICAL PURPOSES
WRITE OR WIRE FOR CATALOGUE AND FULL PARTICULARS
THE DIAMOND DRILL CARBON CO.
61 PARK ROW, NEW YORK, N.Y. CABLE ADDRESS, CHEDOTAN, N.Y.

STEEL PLATE CONSTRUCTION
Steel Oil Storage Tanks, Condensers, Stills, Refinery equipment of every kind, Fabricated and Erected
RITER-CONLEY COMPANY
General Offices—Pittsburgh, Pa.

one of the trade bulletins, the nearest value we find is 2018.6, and corresponding to this is given a 2¾-foot orifice plate for 6-inch pipe and with instrument connections at flanges. And, of course, the reverse procedure of the foregoing computation will figure the volume of gas which will pass the orifice and be recorded on the instrument, and since the coefficient under which we selected the orifice size is a little larger than the factor determined in the computation, the instrument readings, differential and static pressures, will be slightly lower than those which we said we would permit as the maximum.

Special Training Required

The meter man will have had the assistance of the field test man, who will have advised him of the specific gravity factor to use in this case. The orifice plate may now be placed in position and the recording instrument set and connected. Special training and experience is, of course, required in this work. The proper installation and adjustment to correct operating condition is not the work of a novice. And, in order to facilitate correct accounting to plant operation, and especially to promote the very best feeling and relation between the buyer and seller of natural gas, it is gratifying to have complete records developed by the operative forces from the very beginning, and the meter man should arrive at least a few days in advance of the actual delivery of gas for manufacture of gas. Very frequently, of course, this ideal development cannot be had. When it cannot, operation will note carefully the date and hour at which gas may be turned into line and delivered to plant, and from the first accounting period in which charts are available, and from an average of their daily volumes recorded, a retroactive estimate for accounting and settlement can be made up of gas delivered prior to setting of meter. Operation may provide the meter man with a form for report of the following character:

.....
Name of Operating Company
Place..... Date .....
Gentlemen:
I have, this day, set meter No....., manufacturers instrument No....., our meter setting No. ....., being a..... inches diff. x..... lb. pressure. Makers name, ..., recording clock gauge. Connected to a .. ..-inches (Flange Connections) orifice flange (2½ & 8 P. D. inches Connection) in meter loop located on farm ..... land sub. div....., Sec..... Twp....., Range ..... County....., State..... and placed therein a .... inches by .....-inches orifice plate and reported the same as ready for service to Mr. .....
.....
Very Respectfully,
Signature.....

And, correspondingly, the chief engineer or superintendent of operating forces should be provided with a form of the following character, relating to this same detail:

.....
Name of Operating Company
Place....., Date .....
Gentlemen:
Meter No....., located, farm....., ..., Sec..... Twp. ....., Range....., reported by..... as set and ready for service, date ..... was put in operation at .....a.m., p.m. on the ..... day of ....., 19..... Prior to the placing of this meter in service, gas (had) (had not) been passed through its line and loop since .... p.m., a.m., on the ..... day of ...., 19..... Exceptions to the foregoing report noted below:

Un-Metered gas received through line and (or) loop of meter No. .....

In at Dates	hr.	Out at	hr.	No. of hrs. in	Rm'ks or Exp'tions
.....-M.		.....-M.			
.....-M.		.....-M.			
.....-M.		.....-M.			
.....-M.		.....-M.			
.....-M.		.....-M.			

The foregoing being for your records in accounting gas received for credit of said farm and the .....Co. operating said lease and royalty sub-division.
Signature.....

These forms should be made up in triplicate. The meter man should fill his own out and deliver first and second impressions to superintendent and retain the third. The superintendent or chief engineer should make out his report, likewise in triplicate, and as soon as possible deliver his own first and second, together with meter man's first, to company office, retaining in his own file his own third impression to which will be attached Meter Man's second copy. And, if, of course, other conditions develop or occur of a nature or extent beyond the matter for which form provides space for record and explanation, the superintendent will file written memorandum of all such conditions as might affect accounting or settlement, advising fully his company office in the same details of information.

INSTITUTE TO CONSIDER OIL FIRE PREVENTION

The American Petroleum Institute's general committee on fire prevention, of which R. P. Anderson is temporary chairman, will hold its midsummer meeting at the Statler Hotel, St. Louis, Mo., July 22 and 23. Among the topics listed for consideration at this meeting are the following:

1. Report of the subcommittee on vents, screens and flame arrestors. Preceding the discussion on this topic, H. L. Shoemaker, chairman of the subcommittee, will present a summary of the replies received to the questionnaire sent out to the industry in March.

2. Report of the subcommittee on model rating schedule (Frank A. Epps, chairman).

3. Report of the subcommittee on static (J. A. Watterson, chairman).

4. Proposed regulations for safeguarding the construction and operation of automobile oil tank trucks. These proposed regulations are being prepared by the committee on flammable liquids of the National Fire Protection Association. They were first considered by the petroleum industry at an industry conference in Chicago in April, 1925, and are now to be considered in revised form.

5. Record of petroleum fires. Discussion of plans to secure the complete fire record of the petroleum industry.

6. Fire hazards of crude oil.

7. Proposed regulations for the construction and operation of marine oil terminals. These proposed regulations are being prepared by the committee on flammable liquids of the National Fire Protection Association, and will be presented for the first time for consideration by the petroleum industry.

All oil men who are interested will be welcomed at this meeting.

TEXAS CLAIMS RIGHTS IN BED OF CANADIAN

AUSTIN, Tex., July 17.—The Attorney General's department is reported preparing to file suits for the recovery of oil and gas land in the bed of the Canadian River, which splits the Panhandle fields. On the return of Assistant Attorney General R. J. Randolph, he held a conference with B. F. Williams, state reclamation engineer.

Mr. Randolph declined to discuss lawsuits in advance of their filing.

Under the decisions of the courts the state or school fund is the owner of the bed of so-called navigable streams and can issue oil and gas permits in such areas. The law says streams 30 feet or more in width are navigable and, therefore, the beds belong to the state as public lands; that survey for patents extend only to the edge of the stream bed and not to the channel or the middle.

The Canadian River traverses the center of Potter and Hutchinson Counties, and also courses through Roberts, Oldham and Hemphill Counties, besides cutting across a corner of Moore County. It extends entirely across the Texas Panhandle. It is supposed to be adjacent to rich oil and gas deposits.

UNIVERSITY'S OIL DEPARTMENT

The University of Birmingham, England, has registered another step forward in the formal opening of the new buildings of the department of oil engineering and refining by Sir John Cadman, K. C. M. G., the chairman of the adv'sory board of oil engineering and refining at the university.

DETAILED OPERATION IN ALL FIELDS FOR JUNE

(Continued from Page 74)

MUSKOGEE AND WAGONER COUNTIES

29-18-16 Hawkins, B. B. Wheeler et al 1 20
28-17-16 Sarty, Sevreda Oil 1 dry
17-14-17 James, R. H. Pierce et al 2 10
18-17-17 Bruner, Mitchell Oil 1 gas
18-16-15 Peter, Ha t et al 4 dry
11-16-16 Watson, Geo. S. Wilson et al 1 gas
29-15-15 Sango, Link Oil 6 8
14-15-18 Dean, J. A. McCormick 7 dry
5-14-19 Goodrich, C. M. Bradley et al 2 10
25-17-16 White, Stogdill et al 4 25
29-18-16 Prince, Iron Mtn. Oil 1 dry
32-18-16 Cole, P. Boyle 2 dry
6-16-17 Adams, Mitchell Oil 2 dry
4-15-15 Simmons, Crandall & Murta 1 dry
14-15-15 Smith, Papoose Oil 1 dry
33-15-15 Jefferson, Brothers Oil 2 dry

Wells completed 16
Production 72
Dry 9
Gas 2
Gas production 7,000,000

SEMINOLE COUNTY

33-10-6e Davis, F. J. Searight 1 253
10-9n-5e Brown, The Texas Company 1 45
Ingram, Independent O. & G. 1 95
8-9n-8e Cobb, Independent O. & G. 2 20
17-9n-8e Aldridge, Roxana Pet. 1 15
18-9n-8e Island, Oklavania Oil 1 50
25-8n-7e Tommy "B", P. & R. Corp. 1 35
12-8n-8e I. Walker, P. & R. Corp. 1 2642
5-7n-8e Harjo, Magnolia Pet. 4 2084
4-10-8e Yarbow, Sinclair Oil 9 35
5-10-8e Sampson, Gypsy Oil 5 25
7-7n-8e McIntosh, Atlantic O. P. et al 1 dry
33-11-8e Williams, Prairie O. & G. 1 dry
34-11-8e Hill, McMann & Magnolia 6 55
7-9n-8e Hetty Cobb, Independent, Jarvis & Holm 2 65
33-8n-8e Foster, Dixie Oil 5 20
24-9n-6e Carter, Barnsdall Oil 1 2135
Carter, Barnsdall Oil 2 360
31-8n-8e Salinda, W. R. Ramsey 1 25
32-8n-8e Franz, Magnolia Pet. 5 150

Wells completed 20
Production 8109
Dry 2

HUGHES COUNTY

27-9n-9e Brown, Foster Inv. Co. 1 27
Long, Phillips Pet. 4 dry
17-8n-10 Carter, Robinson Fletcher et al 2 dry
30-5n-10 Pearson, Henry Greis & Kerr 1 dry
26-9n-9e Harjo, Transcontinental Oil 9 526
5-7n-8e Frederick, Amerada Pet. 2 dry
1-9n-9e Arbor, Josey Oil 5 150
26-9n-9e Harjo, Transcontinental Oil 4 75
21-9n-10 Buck, Fuhrman & Newman 1 30
4-9n-11 Harjo, Gibson & Zahniser 2 dry
29-5n-10 James, Rice & Kerr 1 dry

Wells completed 11
Production 808
Dry 6

GRADY COUNTY

28-3n-5w Harrison, Magnolia Pet. 3 gas
35-5n-8w Dryden, J. B. Nichols Oil 2 gas
24-3n-6w Smith, C. & O. Drlg. Co. 1 dry
27-3n-5w Cochran, Prairie & Clark & Cowden 1 dry
Mosley, White Eagle O. & R. 1 32
22-5n-8w Pooler, Prairie O. & G. 4 gas
Charles, Sinclair Oil 4 gas
3-4n-8w Dryden, Prairie O. & G. 2 gas
11-4n-8w Moss, Ted Harris 1 gas
27-3n-5w Kilgore, Clark & Cowden et al 2 dry
Folson, Magnolia Pet. 1 35
34-3n-5w Wham, Carter Oil 1 25

Wells completed 12
Production 92
Dry 3
Gas 6
Gas production 123,000,000

STEPHENS AND COTTON COUNTIES

25-1s-9w D. Russell, Magnolia Pet. 7 50
26-1s-8w Fee, Ind. T ust Co. 1-A dry
28-1s-8w Springer, Winkler & McQueen 4 60
34-1s-8w Kagay, Magnolia Pet. 16 gas
11-2s-9w Gunn, Pauline Oil 1 dry
2-2n-5w Garvin-Simms, Carter Oil 7 50
11-1n-8w Lowery, Pet. Prod. Co. 1 dry
35-1s-9w Dolch, Gart et al 1 dry
36-1s-8w Jameson, Merchant & Fain 1 dry
24-1n-9w McFatridge, E. S. Carry 1-A gas
20-1s-8w Brittian, Malernee & Dunlap 8 590
27-1s-8w Tallaferro, Big 12 Oil 5 gas
28-1s-8w Nelson, V. A. Kidney 1-A dry
33-1s-8w Surber, Empire G. & F. 34 32
3-2s-5w Brown, Magnolia Pet. 3 30
26-2n-9w Richardson, Magnolia Pet. 1 dry
26-1s-9w Branch, Garvin Drlg. Co. 1 dry
20-1s-8w Brittian, Safety First Oil 7 5
27-1s-8w Wilkinson, Pearce & Brown 4 15
32-1s-8w Shelton, Inter-Ocean Oil 9 dry
9-5s-10w Johnson, Barker & Eaton 1-A dry

Wells completed 21
Production 832
Dry 10
Gas 3
Gas production 31,000,000

PONTOTOC AND GARVIN COUNTIES

6-3n-7e Lloyd, Ada Dev. Co. 4 72
17-1n-3w Derdeyn, Carter Oil 7 55
Derdeyn, Mid-Continent Pet. 3 6
28-4n-7e Faulkner, Hughes et al 2 dry
16-1n-3w Mauldin, Magnolia Pet. 8 gas
21-1n-3w Boutwell, T. P. C. & O. Co. 1 dry
9-4n-6e McAlister, Pilgrim Pet. 1 dry
18-4n-6e McClure, Bryan & Gillette 1 dry
31-4n-7e Blackburn, Loss Oil 1 dry
6-3n-7e Lloyd, Ada Dev. Co. 5 dry
11-1n-3w Harkreader, Pilgrim Pet. 10 20

Wells completed 11
Production 153
Dry 6
Gas 1
Gas production 2,000,000

CARTER COUNTY

2-2s-3w Delman, Magnolia Pet. 1 dry
22-2s-3w Morris, Magnolia Pet. 1 72
23-2s-3w Lohman, Magnolia Pet. 4 200
20-5s-1e Farve, Amerada Pet. 24 35
Farve, Amerada Pet. 27 50
28-5s-1e Westheimer, Amerada Pet. 14 30
34-1s-3w Snyder, Humble O. & R. 1 gas
34-1s-3w Snyder, Westheimer 1 1445
29-2s-3w Morris, Gypsy Oil 3 gas
15-2s-2w Cox, Magnolia Pet. 1 gas
8-3s-2w Moyer, Humble O. & R. 3 40
20-5s-1e Baptiste, Amerada Pet. 23 20
34-1s-3w Gault, Simpson & Fell 2 450
15-2s-3w Howard, Twin State Oil 1 20
22-2s-3w Carpenter, Humble O. & R. 8 200
7-2s-2w Higgins, Coline Oil 7 gas
15-2s-2w Cox, Magnolia Pet. 1 60
15-2s-3w Jennings, Lathrop-Dennis & Wirt Franklin 1 90
22-2s-3w Carpenter, Wirt Franklin 6 15
18-2s-2w Pierce, Wirt Franklin 1 gas

Wells completed 20
Production 2727
Dry 1
Gas 5
Gas production 64,000,000

MISCELLANEOUS COUNTIES

Grant County—
2-27-3w Webb, Marland Oil 1 50
23-26-3w Tabor.

Caddo County—
12-5n-9w Wagner, Gorton Trust Co. 4 50
31-6n-9w Jones, Briscoe & Hall 1 60

Jefferson County—
33-6s-5w Seay, Gypsy Oil 22 110
Seay, Gypsy Oil 23 100
Seay, A. C. Brown 5 180
Seay, Gypsy Oil 24 125
Seay, Gypsy Oil 25 125
21-5s-6w Cowden, Kelsey et al 1 dry

Rogers County—
4-24-17 Fee, W. E. Ross 24 3
8-23-17 Stokes, H. I. Van Nostran 8 15
32-24-17 Patrick, S. T. Mallory 8 40
Patrick, S. T. Mallory 9 20
8-23-17 Stokes, H. I. Van Nostran 9 10
18-23-17 Traylor, W. M. Kelso 1 dry
20-24-16 Gilmore, Tidal Oil 2 2
Gilmore, Tidal Oil 1 1
9-21-17 McEyle, Webber & Falls O. & G. 4 48
18-19-17 Ponds, S. M. Green & Son 1 dry

Nowata County—
35-25-16 Scott, John T. Textor et al 3 2
25-26-15 Newton, John M. Shipley et al 8 dry
10-25-16 Parish, Jno. and C. P. Shertzer 18 4
27-26-15 Stout, J. A. Stager 3 1
24-26-15 Foster, John M. Shipley 2 12
27-25-14 Moore, Maxwell & Scholl 1 5
31-25-17 Campbell, Prairie O. & G. 13 gas

Washington County—
19-24-13 Laughlin, F. S. Sheeders et al 2 dry

Noble County—
32-20-1e Hall, Nelson & Hardin 1 dry
21-24-1w Smithisler, Champlin Refg. 2 dry
14-24-2e Edmonds, Ossenbeck et al 1 dry

Comanche County—
33-3n-10w Hendricks, Mid-Kansas O. & G. 1 dry
24-2n-10w Allen, Humble O. & R. 1 dry

Marshall County—
30-5s-6e Marshall, United Eight Oil 1 dry

Wells completed 33
Production 967
Dry 11
Gas 1
Gas production 23,000

OSAGE COUNTY

Wells Drilling

Rigs

7-28-7e Tidal Osage Gas Co. 18.
12-28-11 Delmar Oil 1.
1-27-5e Phillips Pet. 10.
12-27-5e Phillips Pet. 6, 7, 11.
7-27-6e Phillips Pet. 6, 10, 15, 7, 10.
21-26-6e Phillips Pet. 10, 11.
21-25-6e Sinclair Oil 3.
28-25-6e Phillips Pet. 4.
30-25-8e Lewis Oil 2.
34-25-11 Devonian Oil 14.
5-24-8e Amerada Pet. 1.
13-24-8e The Texas Company 2.
32-24-9e Peters Pet. 1.
22-23-10 Rex Pyramid Oil 1.
34-22-10 Tidal Osage Oil 18.
3-21-9e Skelly & Moore 5.
15-21-12 Tidal Oil et al 7.
22-21-12 Tidal Oil 2.
5-20-11 Pioneer Pet. 8.
21-25-6e Prairie O. & G. 9.
2-25-6e Prairie O. & G. 1.

Wells Drilling

21-25-6e Prairie O. & G. 8.
10-27-6e Prairie O. & G. 1.
15-29-10 Keener O. & G. 15.
25-29-10 I. T. I. Oil 1.
33-29-11 Reiter-Foster Oil 1.
27-28-6e Laurel O. & G. 1.
1-27-5e Phillips Pet. 4, 8.
2-27-5e Phillips Pet. 1, 2, 3, 5.
Skelly Oil 2.
12-27-5e Phillips Pet. 5, 8, 12, 13, 14, 15.
26-27-5e Skelly Oil 6.
35-27-5e Mid-Kansas O. & G. 1.
7-27-6e Phillips Pet. 14, 16, 13.
17-27-6e Peters Pet. 4.
34-27-6e Kewanee O. & G. 1.
10-27-11 C. O. Ross 1.
21-27-12 J. W. Dyson 1.
6-26-5e Barnsdall Oil 1.
9-26-6e Carter Oil 9.
16-26-6e Carter Oil 17.
20-26-6e Phillips Pet. 14.
21-26-6e Phillips Pet. 4, 8, 9, 12.
Lewis Oil 5, 6, 7.
26-26-8e Petroleum Drlg. Co. 18.
31-26-8e New England Oil 1.
32-26-11 Ohio-Osage Oil 2.
11-25-3e Comar Oil 1.
35-25-5e Gypsy Oil 1.
21-25-6e Sinclair O. & G. 1.
28-25-6e I. T. I. Oil 1.
10-25-8e Carter Oil 1.
19-25-8e A. G. Oliphant 2.
29-25-8e Lewis Oil 10.
30-25-9e New England O. & P. L. 1.
16-24-8e Marland & Agents 8.
29-24-8e Continental Oil 1.
33-24-9e Continental & Prairie 2.
27-24-10 Winona Oil 3.
28-24-10 Peters Pet. 5.
1-24-11 Tselos & Roxana Pet. 4.
1-23-8e Tidal-Osage Oil 1.
5-23-8e Pure Oil 148.
9-23-8e Pure Oil 171.
21-23-8e Barnsdall Oil 1.
Beacon Oil 25.
5-23-9e Continental & Prairie 3.
8-23-10 Adlum et al 2.
13-23-10 American Oil & Dev. Co. 21.
35-22-8e Skelly-Moore 2.
36-22-8e Mid-Kansas Oil 2.
21-22-9e Margay Oil 8.
4-22-10 James Glenn 1.
20-22-10 J. H. Winemiller 4.
23-22-10 Bradford Tank Co. 8.
33-22-10 Tidal-Osage Oil 26.
23-22-11 Branstetter et al 2.
11-21-7e Gypsy Oil 1.
2-21-8e Skelly & Moore 7, 8.
24-21-9e Devonian Oil 1, 1.
24-21-9e Warwick Oil 1.
15-21-10 Devonian Oil 2.
17-21-11 Oklahoma Nat. Gas 713.
20-21-11 Winona Oil 1.
34-21-11 Essley et al 1.
30-21-12 Elliott & Smith 25.
11-20-11 Sand Springs Home 3.
30-20-11 Sand Springs Home 93.
35-20-11 Echo Oil 1
29-20-12 Winona Oil 7.

Shut Down

1-26-9e Ike Johnson 1.
28-24-8e Axelrod et al 2.
28-22-12 Kanupp et al 1.
2-20-10 New England O. & P. L. 1.
Rigs, 28; wells drilling, 91; total, 119.

TULSA COUNTY

Rigs

4-16-13 Stewart, Kewanee O. & G. 16.

Wells Drilling

23-19-10 Nevins, W. E. Brown Oil 1.
23-19-10 Unallotted, W. E. Brown Oil 3.
Postoak, Red Bank Oil 3
9-19-11 Riverbed, Holmes & Gledden 1.
17-19-11 Smith, Hutt & Hutt 6.
24-19-11 Unallotted, Sand Springs Home.
34-19-11 Anderson, Riverland Oil 1-A.
21-19-12 Sango, Sunray Oil 1-A.
31-19-12 Keefer, Sunray Oil 2-A.
24-18-14 Boone, Peterson 1.
28-18-14 Flippen, T. Green et al 1-A.
33-18-14 Colbert, F. A. Best 2.
4-16-13 Stewart, Kewanee O. & G. 17.
Stewart, The Texas Company 6, 8.
13-16-13 Techarns, Cates et al 2-A.
18-16-14 McCoy, Shaffer O. & R. 4.

Shut Down

35-19-11 Inchoe, A. A. Thornton 1.
4-19-14 Berryhill, Ora Upp et al 1.
6-18-13 Davis, T. Henderson et al 1.
11-18-13 Simon, Hall & Hazen 1.
16-18-13 Rentie, L. C. Hivick 3.
6-17-13 Oswalt, Hilt et al 2-A.
3-16-12 Sanderson, S. W. Anthony 2.
13-16-12 Unallotted, Winemiller et al 1.
4-16-13 Buck, Petroleum Corp. et al 19.
Rigs, 1; wells drilling, 26; total, 27.

OKMULGEE COUNTY

Rigs

26-16-11 Houston, Gray Oil & Paraffin Oil 1-A.
26-16-12 Lowe, Baker et al 1.
21-16-14 Rowe, Atlas Oil 3.
24-16-14 Grayson, W. H. Elson & Carter Oil 1.
17-15-11 Gibson, Shaffer O. & R. 8.
18-15-12 Huffstetter, L. C. Wheeler 1-A.
28-13-11 Jones, The Texas Company 2.
29-13-11 Chittim, Wigton & Long 2-A.
32-11-12 Ashbury, Colorado O. & G. 2.
7-15-13 Field, Devonian & Independent 9.
10-15-13 Hood, Red Bank Oil 1.
9-14-13 Sumner, W. T. Campbell 1.
32-14-13 Checote, Vincent & Stansberry 1.
16-14-14 Love, John Aggas 4.
32-14-14 Rentie, Gardner et al 2.
3-13-13 Foster, Sheldon Oil 1.
28-13-14 Doyle, Columbus Drlg. Co. 13.
31-11-13 Han, G. V. Luttes 1.
21-16-11 Marton, Sheridan Oil 1.

Wells Drilling

20-16-12 Pense, Irwin et al 1.
20-16-12 Fee, Crider 1.
Doneghy, Sheldon Oil et al 3.
24-16-12 Tiger, Devonian Oil 2.
29-16-13 Stanley, McCulloch Oil Co. 1.
30-16-13 Tiger, Enfisco Oil 4.
Tiger, McCulloch Oil 1.
2-15-11 Grayson, Jackson & Wise 4.
3-15-11 Clover, Clover 4.
20-15-11 Gibson, Shaffer O. & R. 1.
9-15-12 Forty-Four, Carter Oil et al 2.
23-15-12 Butler, Wigton, Long & Mid-Continent Pet. 1.
24-15-12 Blair, C. E. Campbell 1-A.
Blair, Ted Savoie 2.
26-15-12 Lee, W. E. Hammond 5.
35-15-12 Ostran, Barbara Oil 4.
Claunch, W. E. Hammond 2.
30-14-11 Madigan, R. E. Garrett et al 1.
4-14-12 Farr, W. T. Campbell 1.
11-14-12 Smith, Abbott, Dillard & Carter 1-A.
3-13-11 Anderson, Vincent et al 1.
25-13-11 Lewis, J. A. Swindler & Sons 7.
32-13-11 Thomas, Denver P. & R. Co. 7.
33-13-11 Roberts, Radcliff Oil 1-A.
5-13-12 Baker, Sheldon & Amerada Pet. 1.
32-13-12 Unallotted, Amerada Pet. et al 2.
36-13-12 Peters, G. C. Parker 1.
7-12-12 Wilson, Morton & Co. 7.
3-11-12 West, E. L. Kistler 1-A.
18-11-12 Fish, F. L. Dunn 1-A.
33-11-12 Cowbray, W. L. Barclay 1.
19-15-13 Phillips, Thompson & Black 1.
33-15-13 Tiger, Gray Oil 1.
2-15-14 Deere, Future Dev. Co. 6.
3-15-14 Andrews, R. C. Vincent 1.
7-15-14 Brown, E. B. Grubbs 1.
10-15-14 Sells, W. B. Pine 1.
15-15-14 Francis, Tom Payne 6.
16-15-14 Alexander, Jolly-Ogg Oil 2, 4.
Bruner, The Texas Company 4.
21-15-14 Garnett, Jolly-Ogg Oil et al 2.
Osborn, J. L. Selby 2-A.
Garnett, The Texas Company, 12, 13.
19-14-13 Berryhill, J. W. McCulloch, Inc. 9.
9-14-14 Stevens, W. A. George 11.
16-14-14 Colbert, F. D. Misener et al 10.
15-13-14 Doyle, Simms Oil 16, 17.
24-13-14 Thornsberry, Iron Mtn. Oil 11.
25-13-14 Stake, Sam Bright 7.
1-12-13 Wiley, R. W. Viessen et al 1.
13-11-13 Kanard, B. Morgan 5.
25-13-11 Tobler, Prairie O. & G. 2.

Shut Down

24-16-14 Lowery, E. J. Lambert 1.
34-16-14 Bruner, Harsha & De Laney 1.
20-15-12 Adams, D. D. Mickelson 6.
14-13-11 Strip, Gibson, Zahniser et al 1.
27-13-11 Jones, J. H. Rebold 1.
3-11-12 Calloway, B. Martin et al 1.
4-11-12 Hawkins, J. Droppleman et al 3.
32-11-12 Ashbury, Colorado O. & G. 1.
4-15-13 Althanen, Humble O. & R. 1.
18-15-13 Doyle, W. B. Pine 8.
19-15-14 Harrison, A. W. Cline 1.
14-14-13 Lovett, E. T. McDowell et al 1.
13-14-14 Rentie, T. Sauter 5.
14-14-14 Colbert, Mechling & Berlin 5.
20-14-14 Sadler, F. E. Perkins 18.
18-14-15 Rentie, C. Smith 9.
16-13-13 Sanger, J. W. McCulloch, Inc. 4.
15-13-14 Doyle, Cal Cui Oil 5.
29-13-14 Wiley, F. E. Cuseck 3-A.
9-13-15 Freeman, E. J. Lambert 5.
28-13-15 Hutton, O. T. Stout et al 2.
Rigs, 19; wells drilling, 76; total, 95.

SEMINOLE COUNTY

Rigs

33-10-6e Davis, Searight et al 3.
8-10-8e Deer, Devonian Oil 2.
14-9n-5e Winton, Barnsdall O. & R. 1.
14-9n-6e Rentie, Mid-Continent Pet. 1.
24-9n-6e Dyer, Amerada Pet. 2.
Carter, Barnsdall Oil 3.
25-9n-6e Noble, Empire G. & F. 1.
13-8n-6e Harjo, I. T. I. Oil 1.
26-8n-6e Sewell, I. T. I. Oil 1.
33-8n-6e Brown, Gypsy Oil 1.
14-8n-7e Rodman, Magnolia Pet. 1.
23-8n-7e Hanning, Magnolia Pet. 3.
31-8n-8e Willis, Boggs & Sykes 6.
1-7n-7e Daniel Sam, Wood & Hill 1.
6-7n-8e Carolina, Homaokla Oil 4.
Dindy, Superior Oil 1.

Wells Drilling

28-11-8e Williams, Gypsy Oil 1.
33-11-8e Pierce, Mutual & Continental 4.
Pierce, Sinclair Oil 9.
26-10-6e Harjoche, Carter Oil 1.
34-10-6e Grayson, Carter Oil 1.
Grayson, Mid-Continent Pet. 1.
35-10-6e Harrison, Carter Oil 1.
5-10-8e Williams, Gypsy Oil 3.
1-9n-5e Sango, F. J. Searight 1.
10-9n-5e Johnson, Magnolia Pet. 1.
Lena, Magnolia Pet. 1.
Ingram, Barnsdall Oil 1.
10-9n-6e Noble, Superior Oil 1.
15-9n-6e Johnson, Gypsy Oil 1.
23-9n-6e Rentie, Amerada Pet. 1.
24-9n-6e Carter, Gypsy Oil 1.
Dyer, I. T. I. Oil 2, 8.
M. Carter, I. T. I. Oil 1, 2, 8.
M. Carter, Carter Oil 1.
Dyer, Amerada Pet. 1.
Pahardy, Tidal-Osage Oil 1, 2.
Pahardy, Mid-Continent Pet. 1.
26-9n-6e Fixico, Independent & Tidal-Osage Oil 1.
35-9n-6e Cudjo, Carter Oil 1.
15-9n-7e Jonah, Pure Oil 1.
17-9n-7e Bull, Sinclair Oil 1.
18-9n-7e Goody, Magnolia 1.
20-9n-7e Ripper, Magnolia Pet. 1.
7-9n-8e Cobb, Independent, Jarvis & Holm 1, 2.
Alexander, T. B. Slick 1.
8-9n-8e Buckner, Jarvis, Holm & Atlantic 1.
Buckner, Phillips Pet. 2.
18-9n-8e Jefferson, Gypsy Oil 1.
Peter, Southwestern Pet. 3, 3, 4.
W. Jefferson, Shaffer O. & G. 2, 4.
Smith et al, Winona Oil 1.
15-8n-6e Ida, I. T. I. Oil 1.
17-8n-6e Mothoye, Magnolia Pet. 1.
14-8n-7e Davis, Gypsy Oil 1.
Carolina, Magnolia Pet. 5.
Jackson, T. B. Slick 4.
23-8n-7e Walker, Magnolia Pet. 1.
Hanning, Magnolia Pet. 2.
E. Johnson, Mid-Continent Pet. 1.
25-8n-7e Logan, Dixie Oil 1.
Buck, Magnolia Pet. 1.
26-8n-7e Mulliah, Magnolia Pet. 1.
9-8n-8e Miller, T. Atkins 1.
29-8n-8e Walker, Magnolia Pet. 3.
31-8n-8e Sampson, W. R. Ramsey 2.
Amos, W. R. Ramsey 5.
32-8n-8e Grayson, Amerada Pet. 1, 2, 3, 4.
Long "B", Dixie Oil 2, 4.
Parker, Magnolia Pet. 1, 2.
32-8n-8e Long, Independent & Continental 1, 3.
33-8n-8e Long, Magnolia Pet. 3, 4.
3-7n-6e Litka, Empire G. & F. 1.
9-7n-6e Litka, I. T. I. Oil 1.
22-7n-7e Jackson, Magnolia Pet. 1.
Davis, Transcontinental Oil 1.
5-7n-8e Simon, Independent & Atlantic 2, 3, 4.
Harjo, Magnolia Pet. 6, 7, 8, 9, 10, 11.
6-7n-8e J. Davis, Magnolia & Atlantic 3, 4, 5.
Gillistrap, Magnolia Pet. 2.
Hawkins, Magnolia Pet. 2.
Carolina, Homaokla Oil 3, 5, 6, 7.
Knight "A", Dixie Oil 2, 4, 3.
33-6n-6e Christy, Palmetto Oil 1.
6-6n-8e Winey, R. F. Garland & Co. 1.
33-10-6e Kincaid, Prairie O. & G. 1.

Shut Down

14-8n-7e Porter, Prairie O. & G. 1.
10-11-8e Davis, Transcontinental Oil 1.
15-9n-6e Noble, Tidal-Osage Oil 1.
31-8n-6e Pullatka, Superior Oil 1.
14-8n-7e Jackson, T. B. Slick 3.
15-8n-7e Carolina, Magnolia Pet. 3.
30-8n-8e Bowlegs, Gardner Pet. 1.
6-7n-8e Hawkins, Buttram et al 1.
25-6n-6e Minton, T. B. Slick 1.
24-5n-5e Nitley, Riverside O. & R. & Kinney 1.
Rigs, 16; wells drilling, 109; total, 125.

OKFUSKEE COUNTY

Rigs

2-12-11 Sullivan, J. J. Deaner 1.
3-12-11 Morgan, Barnsdall Oil 3.
Morgan, McMahon 2.
10-12-11 Randall, Barnsdall Oil 4.
32-12-11 Hulsey, Josey Oil 4.
33-12-11 McCoy, Josey Oil 13.
3-11-9e Henderson, Lenox Oil 1.
4-11-10 Stidham, Moose & Daniels 1.
23-11-11 Unallotted, Carter Oil 1.
36-11-11 Holmes, W. L. Umborn 1.

Wells Drilling

26-11-9e Collins, [illegible] 1.
30-11-10 Groves, Prairie O. & G. 1.
23-13-7e Byrd, Sinclair Oil 1.
17-12-7e Hennechuchee, Mid-Kansas Oil 1-A.
14-13-9e Callahan, Darby Pet. 2.
7-13-10 Taylor, L. E. Cooper & R. D. Donnelly 1.
27-12-10 Harjoche, The Texas Company 1.
3-12-11 Grayson, J. J. Deaner 3.
10-12-11 Hook, E. L. Robinson 1.
Randall, Barnsdall Oil 3.
Randall, Phillips Pet. 2, 3.
15-12-11 Henry, Champlin Refg. 3.
32-12-11 Hulsey, Josey Oil 1, 3.
33-12-11 McCoy, Josey Oil 4, 11, 15.
Fields, Josey Oil 1.
35-11-9e Harjo, Gypsy Oil 1.
Berryhill, Mid-Kansas O. & G. 1.
Severs, E. L. Robinson 1.
36-11-9e Buck, Amerada Pet. 1.

Buck, Minnehoma Oil 1.
Mecco, Sinclair Oil 2.
3-11-10 Stidham, Link Oil 1.
8-11-11 Mahardy, J. K. Leard et al 1.
11-11-11 Smith, Bingham & Smith 3.
Hopwood, Colorado O. & G. 3.
13-11-11 Holmes, Independent O. & G. 14.
22-11-11 Holmes, Champlin Refg. 8.
Guy, Champlin Refg. 9.
23-11-11 Jefferson, Champlin Refg. 2.
25-11-11 Barnett, Carter Oil 2.
30-11-11 Holmes, Riverland Oil 1.
1-11-8e Harris, Wilcox O. & G. 1.
16-10-9e Bruner, Independent O. & G. 1.
17-10-9e Carolina, Will McCulloch Oil 1.
21-10-9e Tecumseh, Kingwood Oil 1.
33-10-9e Barnett, Arkansas Fuel Oil 2.
26-10-10 Butler, Schrock & Jameson 1.
11-10-11 Hill, Lou Umburn 1.
18-10-11 Alberty, Amerada, Morgan & Flynn 1.
Simmer, Amerada Pet. 1.
21-10-11 Barnett, Lou Umburn & Future Dev. Co. 1.
15-10-12 Starr, Evans & Starr 1.

Shut Down

13-13-8e Wilson, Peerless O. & R. 1.
14-12-8e Isaac, Western State Oil 1.
1-12-9e Jones, Blakely O. & G. 1.
3-12-10 Hivem, Alex Bays et al 1.
8-12-10 Yarhola, Blakely et al 1.
17-12-10 Harrison, Amerada Pet. 2.
23-12-10 Harjo, Blakely et al 1.
14-11-10 Buckley, Terrien & Balliere 1-A.
15-10-10 Tiplaw, Pratt & Burton 1.
Rigs, 10; wells drilling, 55; total, 65.

HUGHES COUNTY

Rigs

26-9n-9e Kennedy "B," Foster Inv. Co. & Independent 3.
25-9n-9e Harjo, Transcontinental Oil et al 2.
14-8n-9e Long, Independent O. & G. 1.
28-8n-9e Sewell, McCulloch Oil 1.
21-8n-10 Garnett, E. R. Black 1.
11-5n-8e Stewart, Parmenter et al 1.

Wells Drilling

13-9n-8e Paldo, Johnson, Ashe et al 1.
1-9n-9e Cain, Minnehoma Oil 1, 3.
4-9n-9e Alexander, Papoose Oil 10.
18-9n-9e King, Magnolia Pet. 1.
22-9n-9e Manley, Josey Oil 2.
26-9n-9e Davis, Foster Inv. Co. & Independent 2.
26-9n-9e Harjo, Transcontinental Oil 6, 10.
27-9n-9e Long, Gypsy Oil 2, 3.
24-9n-10 Barnett, Roxana Pet. 1.
3-9n-11 Sutton "B," Tidal-Osage Oil 9.
10-8n-7e Davis, Carter Oil 1.
10-8n-9e Harnage, Sands Pet. 1.
22-8n-9e Long, J. L. Brock et al 1.
25-8n-9e Harjo, Independent O. & G. 1.
29-8n-9e Lowe, Kingwood Oil 1.
Carboge, Papoose Oil 1.
18-8n-10 Diamond "A", Dixie Oil 2.
32-8n-11 Bear, Johnson, Ashe et al 1.
5-7n-8e M. Garner, Dixie Oil 2, 3, 4, 5, 6, 7, 8.
Frederick "A," Amerada Pet. 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13.
Garner, Humble O. & R. 1, 2.
Foster, Independent & Sinclair 1.
Ferguson, Gilcrease Oil 1.
Frederick, Magnolia Pet. 1, 2.
M. Garner, Magnolia Pet. 2.
J. D. Garner, Magnolia Pet. 1.
8-7n-8e Turner, Magnolia Pet. 1.
29-7n-8e Harjo, Magnolia Pet. 1.
2-6n-8e Hardage, Humble O. & R. 1.
30-5n-10 Pearson, Rice & Kerr 1.

Shut Down

19-9n-9e Charles, I. T. I. Oil 1.
26-9n-9e Proctor, Independent & Derby Pet. 1.
B. Harjo, Transcontinental Oil 8.
10-9n-10 Ana Lee, Detrick et al 1.
3-8n-9e Harjo, J. E. Burke et al 1.
28-8n-9e Reed, Independent & Margay 1.
29-8n-9e McCrory, Magnolia Pet. 1.
18-8n-10 Diamond "C," Dixie Oil 3.
5-7n-8e Ferguson, J. K. D. Shaffer 1.
M. Garner, Magnolia Pet. 1.
8-6n-10 Kite, Walton, Snyder & Marshall 1.
Rigs, 6; wells drilling, 62; total, 68.

MUSKOGEE AND WAGONER COUNTIES

Rigs

2-16-14 Still, Little Ed Oil 14.
19-17-18 Bradley, J. Nealy 3.
17-15-17eWarrior, W. R. Sommerville 1.
28-14-16 Brown, Jolly-Ogg Oil 1-A.
5-14-19 Cumpton, Cumberland Oil & Whaley 3

Wells Drilling

29-18-16 Hawkins, D. T. Marr et al 2.
28-18-17 Childers, R. M. Lear 1.
6-17-15 Kelly, W. R. Sommerville 2.
21-17-16 Chilers, Severeda Oil 2.
20-17-17 Perryman, Gilcrease 3.
36-16-17 Brown, Harris & Whaley 1.
8-16-18 Chissoe, B. B. Wheeler et al 1.
28-15-15 Manuel, Link Oil 1.
29-15-15 Morris, Cory & Anders 1.
30-15-15 Vanderslice, H. P. Culp et al 3.
32-16-15 Vanderslice, E. L. Kistler 4.
31-15-19 Smith, Ozark Drlg. Co. 1.
12-14-16 Grayson, W. Reed 1.
1-14-17 Sango, T-O Pet. Co. 7.
28-14-17 Dean, E. C. Dooley et al 2.
2-14-18 Cherry, Jolly-Ogg Oil 1.
5-14-19 E. Goodrich, C. M. Bradley et al 3.
19-14-19 Hardeshell, E. M. Johnson 1.
27-13-19 Neal, Clay Brown & W. D. Shedden 1.

Shut Down

19-19-16 Tiger, May Brothers et al 1-A.
19-18-16 Moody, J. Stryker 2.
29-18-17 Abrams, Flint Ridge Oil 2.
13-17-16 Marshall, W. A. Dodd et al 2.
35-16-17 Marshall, Denton & Marshall 1.
14-15-15 Smith, King & King 6.
18-15-15 Ware, Wirick & King 3.
31-15-15 Mayson, E. A. Hutchinson et al 3.
28-15-17 Taylor, J. M. Foltz 5.
18-14-17 James, Peterson et al 6.
20-13-16 London, Boomer Oil 1.
Rigs, 5; wells drilling, 30; total, 35.

CREEK COUNTY

Rigs

3-17-9e Hope "A", Prairie O. & G. 3.
13-19-8e Ross, Gled Oil 4.
24-19-8e Grayson, Grieves Oil 1.
22-17-7e Fife, Tidal Oil 12.
23-17-8e Walker, Savoy Oil 3.
36-15-7e Tiger, R. J. Jennings 1.
20-15-8e Beaver, Skelly Oil 1-A.
22-15-8e Williams, C. G. Tibbens 1.
2-14-8e Ponds, Gypsy Oil 9.
19-18-9e Sherman, H. U. Bartlett 1.
29-18-9e Siler, J. A. Hull 1.
8-18-10 Fields, H. Sparks et al 1.
22-18-11 Bruner, W. J. Cole 1.
6-18-12 Unallotted, Sunray Oil 6.
31-17-9e Marshall, Gypsy Oil 1.
4-17-10 S. Johns, McCulloch Oil 1.
10-17-10 Hay, Carpenter et al 1.
11-17-10 Unallotted, O. M. Ireland 1.
11-17-10 Wrightsman, Wilcox & Witten 3.
19-17-10 Dickson, Independent O. & G. 2.
20-17-10 Wiley, F. C. Adams 2.
24-17-10 Strip, Brooker & Warren 2.
24-17-10 Dawson, J. H. Wright 13, 14.
Tahkaney, J. H. Wright 9, 11.
Bucktrot, Pioneer Pet. 7, 8.
8-17-11 Freeman, O. M. Ireland et al 7.
16-17-11 Wilson, M. Mead et al 1-A.
30-17-11 Garald & Nichols, M. W. Evans 1.
7-16-9e Santo, W. R. Davis 1.
21-16-9e Hendrickson, Jackson & Wise 3.
32-16-9e Vaughn, Grahoma Oil 1.
9-16-12 Penoka, Turner & Turner 4.
30-15-9e Unallotted, C. G. Tibbens 3.
Unallotted, C. G. Tibbens 31.
20-14-10 Strip, T. B. Slick 2.

Wells Drilling

21-17-7e Litchfield, Prairie O. & G. 39.
22-17-9e Self "A", Prairie O. & G. 7.
19-15-8e Roberts, Prairie O. & G. 1.
1-14-7e Ford, Prairie O. & G. 2.
11-14-8e Henderson, Prairie O. & G. 4.
6-19-7e McElroy, Markham & Schoenfeldt ?.
32-19-7e Richards, Magnolia Pet. 4.
5-19-8e Maxey, Bartlett & Mann 2.
6-19-8e McElroy, Mann & Smith 1.
13-19-8e Ross, Gled Oil 3.
Ruth, Gled Oil 4.
Peters, Burlengane & Sharp 4, 5, 7.
14-19-8e Miller, Devonian Oil 3.
1-18-7e Jack, Burnett Oil 2.
4-18-7e Atkins, Gem Oil 25.
6-18-7e Britton, Shaffer O. & R. 7.
8-18-7e Yarhola, Riverside O. & R. 1.
12-18-7e Jones, Dixie Oil 1.
16-18-7e Coker, Magnolia Pet. 29.
18-18-7e Fisher, Shaffer O. & R. 13.
22-18-7e Wrightsman, R. E. Freeman & Tiger Oil 1-A.
32-18-7e Derrisaw, Magnolia Pet. 8.
3-17-7e Stewart, Mid-Continent Pet. 3.
15-17-7e Stewart, Mid-Continent Pet. 25.
22-17-7e Fife, Tidal Oil 5.
11-17-8e Watson, Bu-Vi-Bar Pet. 1.
14-17-8e Johnson, Aztec Oil 6.
17-17-8e Wright, F. R. Billingslea 1.
22-17-8e Johnson, Savoy Oil 5.
26-17-8e Cobb, Barnsdall Oil 3.
Sarhilla, O. C. Chapman et al 1.
27-17-8e Bigpond, Inter-Ocean & McCulloch Oil 4.
Bruner, Southwestern Pet. 2.
27-17-8e Alec, T. B. Slick & Stover 3.
5-16-8e Roberts, Black Gold Oil 2.
9-16-8e Yardy, Margay Oil 3.
10-16-8e Myers, Slick & Kawfield 2.
21-16-8e Arsoyalee, Peters Pet. 3.
6-15-7e Wattie, Magnolia Pet. 1.
Steele, Pure Oil 1.
2-15-8e Harjo, Wilcox O. & G. 5.
19-15-8e Halloway, Lima O. & G. 1.
30-15-8e Benjamin, Lima O. & G. 2.
31-15-8e Bigpond, Carter E. Davis 1-A.
Sissie Jim, Tidal Oil 2.
2-14-8e Ponds, Gypsy Oil 8.
4-14-8e Brown, Simms Oil 1.
12-14-8e McKan, Skelly Oil 14.
13-14-8e Farha, C. G. Tibbens 2.
Sewell, C. G. Tibbens 10.
26-14-8e Johnson, C. G. Tibbens 11.
30-14-8e McGilbray, Black Gold Oil 1-A.
18-19-9e Sewell, Roxana Pet. 1-A.
31-19-9e Barnett, Selby O. & G. 2.
20-18-9e Grayson, McCulloch Oil 1.
21-18-9e Walker, J. A. Hull 2.
22-18-9e Taylor, M. P. Evans et al 1.
30-18-10 Marshall, Madden & Madden 1.
2-18-11 Sherrill, Sheridan Oil 2.
3-18-11 Leader, Gray Oil 3.
12-18-11 Unallotted, Crude Oil Dev. 1.
Land, E. L. Kistler 1-A.
15-18-11 Snow, Redgraves et al 1.
18-18-11 Bruner, Posey Short et al 2.
6-18-12 Townlot, Day Bros. 1-A.
Kennedy, Gypsy Oil 9.
Gray, Gypsy Oil 19.
Bigpond, Regal Oil 27.
Sango, Sunray Oil et al 6.
3-17-9e Chisholm, Harwell et al 1.
21-17-9e Charcotenne, Wood & Farren 4.
24-17-9e Dice, McCulloch Oil et al 1.
8-17-10 Pemberton, Independent & Tarman 1.
12-17-10 Harris, R. O. Bailey 1.
16-17-10 Littlehead, M. P. Evans 1.
19-17-10 Dickson, The Texas Company 1.
22-17-10 Gwin, Dillard et al 1.
23-17-10 Fulson, Kirshner et al 1.
Holden, Kirshner et al 2-A.
Baker, Easter Oil 1-A.
24-17-10 Tiger, Nowata O. & R. 1.
Bucktrot, Pioneer Pet. 6, 5.
Tahkaney, J. H. Wright 1, 8, 10.
26-17-10 Bucktrot, H. C. Wilson 2.
32-17-10 Yellowhand, Skelly Oil 1.
34-17-10 Bucktrot, B-Jack Oil 1.
17-17-11 Wacoche, Shaffer O. & R. 5.
28-17-11 Watkins, Ike Simmons 2.
Barnett, Transcontinental Oil 4.
29-17-11 Schmidt, Henry & Avers et al 1.
21-16-9e Jacobs, Emery & Son 7.
36-16-9e Allen, Williams & Bell 1.
8-16-10 Sividan, Williams & Cole 1.
12-16-10 Unallotted, Sherry et al 1.
17-16-12 Barton, McCulloch Oil 1.
30-15-9e Foster, Skelly Oil 5.
Unallotted, C. G. Tibbens 27, 29.
1-15-10 Ashbury, H. C. Wilson 1.
5-14-9e Long, Joemack Oil 1.
17-14-9e Lucas, Gladys Belle Oil 1.
36-14-9e Lampkins, Wood Oil 1.
16-14-10 Bear, Atlantic O. P. 1.
17-14-10 McNevins, C. F. Noble 1.
23-14-10 Scott, Plymouth Pet. 1.
29-14-10 Bear, Independent O. & G. 1.

Shut Down

15-19-7e Manuel, H. W. Skelly 1.
30-18-8e Holman, J. C. Walters et al 1.
17-17-7e Tiger, Gibson & Baker 1-A.
22-17-8e Mitchell, Barnsdall Oil 3.
1-19-9e Carolina, Buckeye Drlg. 3.
27-18-10 Allen, Vaughn & Wheeler 6.
14-18-11 Tiger, O. N. White 1-A.
32-18-11 Frew, Cross et al 1.
19-17-10 Wanuke, A. B. Ice 3.
34-17-11 Tiger, Overless et al 1-A.
21-16-9e Greenwood, Jomack Oil 2.
12-16-10 Hughes, Shaffer O. & R. 1.
11-14-10 Webb, H. George et al 1.
Rigs, 38; wells drilling, 124; total, 162.

PAWNEE COUNTY

Rigs

22-23-4e Zoldoskie, Donahue & Carter Oil 4.
35-22-6e Hays, Devonian Oil 1.
Miller, Devonian Oil 1.
Dobson, Devonian Oil 2.
28-20-5e Williamson, Magnolia Pet. 1.
15-20-6e Platt, Shaffer O. & R. 2.
16-20-6e Burgman, Jim Glenn Oil 4.
36-20-6e School land, Riverside O. & R. 1.
7-20-8e Childers, Minnehoma & Shelts 4.
10-20-8e Mullendore, Sinclair Oil 11.

Wells Drilling

23-10-7e Yeager, Prairie O. & G. 1.
16-20-9e Delp, J. H. Markham 1.
23-20-9e Richards, Suppees et al 1.
33-23-3e Miller, Watchorn O. & G. 15.
9-22-3e Arkeketa, Magnolia Pet. 3.
13-23-4e School land, Magnolia Pet. 1.
27-23-4e Brain, J. L. Donahue 1-A.
4-23-5e Krow, Magnolia Pet. 1.
16-22-4e School land, Magnolia Pet. 1.
26-22-5e Redd, Bu-Vi-Bar Pet. 1.
1-21-6e Bryan, Independent O. & G. 1.
8-21-6e Robertson, Dixie Oil 1.
16-21-6e School land, 101 Ranch Oil 1.
13-21-7e McIntyre Minnehoma Oil 5.
23-21-7e Carter, Turner et al 1.
24-21-7e Mullendore, Minnehoma Oil 7.
29-21-7e Long, Garber & Pulse 1.
31-21-8e Anglin, J. B. Grieves 6.
32-21-8e Sigon, Adamson C. O. & G. Co. 7.
32-20-5e Berry, Magnolia Pet. 2.
33-20-5e Pollock, Gypsy Oil 3, 4.
School land, Marland & Mid-Continent Pet. 1.
School land-Miner, Marland & Mid-Continent Pet. 1.
School land No. 11, Marland & Mid-Continent Pet. 1.
School land "M", Marland & Mid-Continent Pet. 2.
3-20-6e McCroskey, Geo. Baker et al 1.
9-20-6e Privett, Magnolia Pet. 4.
B. Fugate, Magnolia Pet. 2.
16-20-6e School land, Magnolia Pet. 5.
17-20-6e Baker, Magnolia Pet. 3.
19-20-6e White, Champlin Refg. 1.
21-20-6e Freeman, Josey Oil 5.
22-20-6e Lesher, Fern Oil 3.
9-20-7e Gillespie, Superior Oil 1.
24-20-7e Baker, Ora Steen 1.
25-20-7e Brown, Burton et al 4.
6-20-8e George, Prod. Consolidated 1-A.
10-20-8e Dunn, Selby O. & G. 1.
18-20-8e Turner, Shortgrass et al 1.
23-20-8e Van Eman, Selby O. & G. 6, 7.
24-20-8e Hennessey, McMahon Oil 7.

Shut Down

5-22-3e Wolfe, Champlin Refg. 1.
5-23-5e Phillips, Haley, Garber & Pulse 3.
20-20-5e Good Chief, Champlin Refg. 1.
28-20-6e White, Davis Drlg. Co. 1.
4-20-7e Hallett townsite, W. A. McCabe et al 1.
11-20-7e Rogers, Block & Carnahan 1-A.
27-20-9e Mitchell, Suppees & Abeicht 1.
Rigs, 10; wells drilling, 50; total, 60.

KAY COUNTY

Rigs

16-29-1w Brown, Comar Oil 1-W.
School land, Mid-Cont. Pet. 1-A.
20-29-1w Day, The Texas Co. 1-A.
21-29-1w Priboth, Comar Oil 9-W, 8.
5-28-1w McCullough, Comar Oil 1.
8-28-1w Horne, Comar Oil 2-W.
28-28-2e Huddleson, John Stark et al 1.
3-27-1w Moore, Arkansas Fuel Oil 2.
4-27-1w Kelly, Arkansas Fuel Oil 6.
28-25-1w Leegerote, Barnsdall Oil 1.
Mahoney, Wentz Oil 11, 12, 13.
Siler, The Texas Co. 3, 4.
Siler, T. B. Slick 1.
12-26-2w North, Marland Oil 6.
5-28-1w Johnson, Comar Oil 1-W.

Wells Drilling

1-26-2w Smith "A," Prairie O. & G. 7.
Smith "B," Prairie O. & G. 7.
17-27-1w Boyce "B," Prairie O. & G. 1.
18-29-3w Atkinson, Mississippi Valley Oil 1.
13-29-2w Olson, Marland Oil 1.
20-29-1w Day, The Texas Co. 2.
Day, Comar Oil 1.
21-29-1w Duncan, Comar Oil 10.
16-29-1e School land No. 11, Wentz Oil 2.
17-29-1e Dickerson, Marland Oil 1.
Brockhouser, Vernon O. & G. 4.
25-29-1e Smith, Strosnyder et al 1.
30-29-1e Hennessey, Junction Oil 2.
4-28-2w Wood, Moore Oil 1.
20-28-2w Smith, Miss. Valley Oil 1.
5-28-1w Biddle, Comar Oil 6-W.
Orr, Comar Oil 3-W.
McCullough, Comar Oil 3.
Bechtel, Comar Oil 1-W, 7-W.
Lawrence, Comar Oil 3.
Townsite, Braman Oil 1-W, 3-W, 1, 2.
8-28-1w Horne, Comar Oil 1-W, 3.
Andrews, Wentz Oil 1.
27-28-1w Walker, Simms Pet. 1.
36-28-1w School land, Dewey & Hoffer 1.
6-28-1e Wolfe, McComas et al 1.
21-28-3e Street, Davis Drlg. Co. 1.
3-27-1w Dowes, Tidal & Ostot 1.
Moore, Arkansas Fuel Oil 1.
4-27-1w Kelly, Arkansas Fuel Oil 4, 5.
Moore, Schouwald et al 1.
Case, Polling & Denny 4.
5-27-1w Jameson, Blackwell O. & G. 2.
8-27-1w Boggs, Tidal Oil 3.
Jameson, Gypsy Oil 3.
Moore, Blackwell O. & G. 1.
Harris, Globe O. & R. 1.
8-27-1w Brown, Harris & Hahn 3, 4.
Geiger, Blackwell O. & G. 7, 8, 9.
10-27-1w Moore, Black Gold Oil 3.
Patterson, Ostot, Hoag & McCam 1.
16-27-1w Barr, Ostot et al 3.
17-27-1w Payne, Comar Oil 1.
27-27-1w Peckham, Dance et al 1.
31-27-1w Cade, Marland Oil 1.
32-27-1w Chamber, O'Kansas Oil 1.
28-27-1e Buessing, Ballentine et al 1.
3-27-2e Balzar, Miss. Valley Oil 1.
31-27-2e Harris, Twin State Oil 1.
1-26-2w Hockstate, Marland Oil 3-A.
Fitzgerald, Marland Oil 2-A.
12-26-2w North, Marland Oil 2-A, 4, 7.
12-26-2w Hubbard, Marland Oil 6.
28-26-1w Barclay, Tom Palmer et al 1.
32-26-2e McNeil, Ponca Lee Oil 1.
13-25-2w School land, Marland Oil 1.
21-25-2w Turk, Carter Oil 5.
15-25-1w McDaniels, Tonkawa Dev. 1.
28-25-1w Gardner, Gypsy Oil 1.
28-25-1w Mahoney, Wentz Oil 9.
Siler, The Texas Co. 2.
35-25-1w Endicott, T. B. Slick 7.

Shut Down

21-29-1w Priboth, Comar Oil 2, 8.
21-28-1w Harvell, Comar Oil 8.
5-28-1w Orr, Comar Oil 1.
McCullough, Comar Oil 5.
11-28-1e Lowery, Okla. Northern O. & G. 1.
16-27-1w Barr, Manahan et al 2.
Slocum, Anolu Oil 3.
18-27-1w Johnson, Una Lee Oil 1.
6-26-1w Glasgow, National Union Oil 1.
33-25-1w School land, Cosden & Marland 10.
34-25-1w Endicott, Pennok Oil 3.
4-25-2e Foureyes, Marland Oil 10.
Rigs, 19; wells drilling, 86; total, 105.

PAYNE COUNTY

Rigs

24-19-4e Pleasants, Magnolia Pet. 5.
8-19-5e Hughes, Magnolia Pet. 1.
10-19-5e Mullins, Pure Oil 2.
13-19-5e Crockett, Sinclair Oil 12.
23-18-1e Tilber, Twin State Oil 1.
26-18-3e Liston, Empire G. & F. 5.

Wells Drilling

14-19-4e Shannon, Prairie O. & G. 1.
Erwin, Prairie O. & G. 2, 3.
23-19-4e Ellis, Prairie O. & G. 3.
4-19-1w Kinneman, Reiter-Foster Oil 1.
12-19-1w Combs, Tidal Oil 1.
3-19-3e Hall, Mid-Cont. Pet. 1.
13-19-4e Stover, Roxana Pet. 2, 4.
14-19-4e Shannon, Magnolia Pet. 1.
Stephenson, Mid-Cont. Pet. 1.
23-19-4e Stover, Magnolia Pet. 1.
Pleasants, Magnolia Pet. 3, 4, 6.
36-19-4e School land, Magnolia Pet. 1.
8-19-5e Garr, Magnolia Pet. 4.
Hughes, Magnolia Pet. 1.
36-19-5e Long, Josey Oil 5.
22-18-3e Berry, Mulberry Oil 1.
Nelson, T. P. C. & O. Co. 1, 2.
Nelson, J. A. Hull 2.
23-18-3e Derry, Deep Rock O. & G. 5.
Ostrander, Deep Rock O. & G. 1.
Shannon, Deep Rock O. & G. 2, 3, 4.
Givens, Shaffer O. & R. 5.
26-18-3e Barth, Deep Rock O. & G. 4.
Liston, Empire G. & F. 1, 3, 4.
Waltman, T. C. M. Oil 1, 3, 4.
27-18-3e Murlin, Gypsy Oil 1.
10-18-4e Cole, Deep Rock O. & G. 1.
31-18-4e Parmele, Superior Oil 1.
1-18-5e Laughlin, Home Gas 2.
7-18-5e Blue, Marland Oil 3.
8-18-6e Welch, Consolidated Drlg. Co. 1-A.
27-18-6e Culbertson, McGill et al 1.
5-17-4e Sharrum, Mulberry Oil 4.
6-17-4e Payne, Magnolia Pet. 1.

Shut Down

21-19-1w Lewis,Ponca O.& G. 1.
13-19-4e Stover, Roxana Pet. 5, 6.
8-19-5e Garr, Magnolia Pet. 3.
11-19-6e Barry, A. A. Bailey & Superior 1.
1-18-5e Laughlin, Josey Oil 4.
Rigs, 6; wells drilling, 51; total, 57.

LINCOLN COUNTY

Rigs

18-16-4e Morris, Clean Pet. 1.
8-15-6e Hopewell, Gypsy Oil 1.
10-14-5e Davenport Townsite, Magnolia Pet. 1.
11-14-5e Roberson, Southwestern Pet. 4.
8-12-5e Richardson, Barnsdall Oil 1.
13-12-6e Strip, Mid-Cont. Pet. 1.

Wells Drilling

35-15-5e Sproleder, Prairie O. & G. 2, 4.
8-14-5e Martin, Prairie O. & G. 1.
31-17-4e Scott, Roxana Pet. 1.
33-17-4e Griswald, Mid-Kansas O. & G. 1.
30-17-5e West, Carter Oil 1.
31-17-5e Cook, Shaffer O. & R. 1.
5-16-5e Van Camp, T. P. C. & O. Co. 1.
35-16-6e Johnson, Madden & J. A. Hull 1.
25-15-3e Lillibridge, Wilcox O. & G. 1.
16-15-4e School land, Empire G. & F. 1.
36-15-4e Cull, Ruby et al 1.
33-15-5e Temming, Magnolia Pet. 1.
35-15-5e Caves, Gypsy Oil 11.
8-15-6e Owens, Magnolia Pet. 1, 2.
Earp, Mid-Cont. Pet. 7.
Hopewell, Phillips Pet. 3, 4.
16-15-6e School land, Sinclair Oil 1.
7-14-4e Norton, T. B. Slick 1.
2-14-5e Tuttle, Carter Oil 8.
Hopkins "C," The Texas Co. 3.
3-14-5e Belless, Amerada Pet. 8.
Belless, Magnolia Pet. 2.
4-14-5e Thompson, Magnolia Pet. 4, 6.
Strough, Pure Oil 2.
8-14-5e Slack, Magnolia Pet. 1.
10-14-5e L. Chapman, Magnolia Pet. 2, 3.
M. & F. Chapman, Magnolia Pet. 2.
Patterson, Phillips Pet. 7.
11-14-5e Caves, Gypsy Oil 14, 15.
Chapman, Magnolia Pet. 2, 3.
21-14-5e Deane, Southwestern Pet. 1.
27-14-5e Garrett, Sinclair Oil 1.
7-13-3e Ewing, Douglass Oil 1.
33-13-4e Williams, Phillips Pet. 1.
1-12-5e Thompson, Independent & McCulloch 1.

Shut Down

26-16-5e Rittenhouse, Flynn & Morgan 1.
34-15-5e Sproleder, Magnolia Pet. 3.
15-15-6e Hubbard, Johndahl 1.
16-13-5e School land, Amerada Pet. 1.
Rigs, 6; wells drilling, 46; total, 52.

NOBLE COUNTY

Wells Drilling

18-24-2w Coulter, D. W. Moore et al 1.
16-24-1w School land, Mid-Cont. Pet. & Marland 12.
1-24-1e 101 Ranch, George Miller 1.
9-24-1e Miller, Independent et al 1.
15-23-2w Washburn, Sinclair Oil 1.
22-23-2w Brumfield, Mid-Co Pet. 15.
18-22-2w Pfrimmer, Hartman & Skaer 1.
13-22-2e Tillman, Skelly & A. D. Crow 1.
15-21-2w Taylor, Magnolia & Bu-Vi-Bar Pet. 1.
Sams, Magnolia & Bu-Vi-Bar Pet. 3.
16-21-2w Hoffman, Magnolia Pet. 1, 2.
Hoffman, Red Bank Oil 1.
Treman, Red Bank Oil 1.
21-21-2w Reynolds, Magnolia Pet. & Bu-Vi-Bar Pet. 1.
22-21-2w Weeder, Magnolia Pet. 1.
28-21-2w Snyder, Bu-Vi-Bar Pet. 1.

Shut Down

22-24-2w Kurby, Wilkins & Kors 1.
29-24-1w Reed, Mid-Co Pet. 6.
33-22-2w Burk, Elane Oil 1.
7-21-1w Williams, R. L. Corley 1.
12-21-3e Sawyer, Ossenbeck & McMann 1.
26-22-2w Schoop, Champlin Ref. 1.
Rigs, 0; wells drilling, 23; total, 23.

GRANT COUNTY

Rigs

6-27-3w Barnard, Flannigan & Dedman 1.
24-27-3w Birdston, Burns & Beasley 1.

Wells Drilling

6-28-3w Snyder, Ostot Dev. 1.
19-28-3w Lehring, Wrightsman 1.
36-28-3w School land, Marland Oil 1.
22-27-3w Lane, Blackwell O. & G. 2.
23-27-3w Margin, Kay O. &. 3.
16-26-3w Sherrer, Flannagan & Dedman 1.
35-26-3w Muegge, Gypsy Oil 1.

22-25-4w Vallner, Cowden 2.
Shut Down
14-27-3w Howell, Western States Oil 1.
22-27-3w Stewart, Western States Oil 4-A.
23-27-3w Flood, Larutan Fuel Co. 1.
27-27-3w Lane, Western States Oil 1.
34-26-4w Royce, Brazill & Moses 1.
Rigs, 2; wells drilling, 13; total, 15.

GARFIELD COUNTY
Rigs
24-24-3w Disney, Failing & Lawson 1.
36-23-5w Nelson, Ostot et al 1.
13-22-4w School land, Mid-Cont. & Marland 60.
Walker (North), Sinclair Oil 6, 58, 59, 60, 61.
36-22-4w Austin, Sinclair Oil 6.
19-22-3w Crews, Sinclair Oil 16.
Kisner (West), Sinclair Oil 32.
11-21-4w Fee, Beople et al 1.
Wells Drilling
1-22-4w Johnson, Prairie O. & G. 2.
12-22-4w Wishard, Prairie O. & G. 12.
6-21-3w Bostwick, Prairie O. & G. 1.
22-24-6w Zalondek, Wilcox O. & G. 1.
10-24-4w Meyers, Sinclair Oil 1.
32-24-4w Brunkin, Shaffer-Gardener 1.
14-24-3w Gorusch, Sagar Oil 1.
34-24-3w Hayes, Roxana Pet. 1.
15-23-5w Hennessey, Wilcox O. & G. 1.
6-23-4w Cheveller, Haley, Garber & Pulse 1.
29-23-4w Bunker, Roxana Pet. 1.
31-23-4w Johnson, Bu-Vi-Bar Pet. 1.
19-23-3w Garber, Marland Oil 1.
12-22-4w Wishard, Mid-Cont. Pet. 17.
13-22-4w School land, Mid-Cont. Pet. & Marland 6-A, 46, 63, 65, 66, 67, 69, 70.
Denker, Sinclair Oil 6.
Walker (North), Sinclair Oil 15, 29, 43, 44, 45, 46, 47, 48, 50, 51, 52, 53, 54, 55, 56, 57.
Wolfe, Roxana Pet. 3.
14-22-4w Dively, Sinclair Oil 5.
24-22-4w Belveal, Healdton Pet. 6, 19, 33.
Dively, Carter Oil 53.
Belveal, Sinclair Oil 21.
36-22-4w Metcher, Sinclair Oil 16-A.
7-22-3w Lynds, Franchott 3.
18-22-3w Schroeder, Roxana Pet. 10-W, 3-H, 8-H, 2-L, 4-L, 11-L, 1-T, 2-T, 5-T, 6-T, 7-T, 8-T, 9-T.
Hartley, Sinclair Oil 4, 6, 33, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50.
Whitney, Sinclair Oil 6.
19-22-3w Kisner (East), Sinclair Oil 15.
Kisner (West), Sinclair Oil 12, 27, 29, 30, 31, 33.
21-22-3w Allen, Champlin Ref. 2-A.
30-22-3w Burns, Sinclair Oil 1.
Campbell, Sinclair Oil 21.
L. Crews, Sinclair Oil 6.
12-21-5w Smith, Tidal Oil 1.
12-21-4w Schriver, Beople et al 1.
5-21-3w Cain, Pender Pet. 2.
6-21-3w ——, Imo Oil 1.
22-21-3w Detwiler, Slick, Harrington et al 1.
11-20-8w Secor, Garfield Buell et al 1.
2-20-5w Fee, Sinclair Oil 1.
9-20-4w Looman, Marland Oil 1.
12-20-4w Miller, Marland Oil 1.
16-20-4w School land, Mid-Cont. & Marland 1.
Shut Down
17-23-8w Dyche, Jack Reid et al 1.
26-23-7w Cox, Katherine Oil Synd. 1.
6-23-6w Hess, Weir & Wood 1.
35-23-3w Carter, Failing & Lawson 1.
3-22-5w Swinery, Ashby & Barr 1.
1-22-4w Seaman, Hopper et al 1.
13-22-4w Wolfe, Roxana Pet. 4-W, 5-W.
24-22-4w Beggs, Champlin Ref. 34.
27-22-4w Peters, Hopper et al 1.
16-22-3w School land, Hopper-Chappell 1
18-22-3w Schroeder, Roxana Pet. 13-W.
2-21-7w Montgomery, Frank Frantz 1.
31-21-5w Vanderwork, E. A. Summers 1.
7-20-6w Semrad, O. O. Owens 1.
13-20-4w Faramel, Summers et al 1.
Rigs, 13; wells drilling, 118; total, 131.

GRADY COUNTY
Rigs
31-10-8w Thompson, Hawkins & Young 1.
10-9n-6w Baker, Travis et al 1.
23-5n-8w Edmundson, Skelly Oil 4.
35-6n-8w Dryden, Magnolia Pet. 1.
15-5n-7w Thomas, Gant & Arrowsmith 1-A.
11-4n-8w Moss, Ted Harris 2.
24-3n-6w Smith, C. & O. Drig. Co. 1.
28-3n-5w Kerans, Magnolia Pet. 1.
Wells Drilling
3-4n-8w Dryden, Prairie O. & G. 3.
29-6n-7w Brown, Becker et al 1.
23-5n-8w Edmundson, Stogner et al 3.
15-5n-7w Mull, Badgett & Hughes 1.
14-4n-8w Pendley, Magnolia Pet. 1.
Cox, Carter Oil 1.
31-4n-5w Anderson, Magnolia Pet. 1.
8-3n-5w Dutton, Sinclair Oil 1.
Gardenshire, Carter Oil 1.
8-3n-5w Horton, Carter Oil 1.
21-3n-5w Kerans, Carter Oil 1.
27-3n-5w Adair, Carter Oil 1.
Adair, Critchlow et al 2.
Folson, Gant et al 1.
34-3n-5w Mitchell, Magnolia Pet. 1.
Mitchell, McBride et al 1.
Shut Down
8-8n-8w Bray, John Schwartzfischer 1.
31-8n-7w Webb, Watchorn O. & G. 1.
27-5n-8w Chandler, American Drlg. Co. 1.
35-5n-8w Dryden, J. B. Nichols Oil 1.
10-5n-7w Kleeman, Badgett & Hughes 1.
5-3n-5w Dutton, Garvin Drlg. Co. 1.
24-3n-5w Martin, Todd et al 1.
Rigs, 8; wells drilling, 23; total, 31.

COMANCHE COUNTY
Rigs
10-3n-10w Jennings, Magnolia Pet. 1.
Wells Drilling
2-4n-11w Haller, Garvin Drlg. Co. 2.
21-4n-10w Rowe, Mid-Kansas Oil 1.
30-4n-10w Hinds, Clyde Becker 1.
34-4n-10w Gambel, John Graham 2.
10-2n-10w Spitler, Danciger Oil 1.
23-2n-10w Allen, Shaw & Rathke 1
24-2n-10w Cox, William Green 3.
Watson, Westheimer & Daube 1.
30-2n- 9w Indian, Continental Oil 2.
Hardy, Magnolia Pet. 2, 3.
31-2n- 9w Indian, Wirt Franklin 1.
30-1s-13w Cox, Mid-Kansas Oil 1.
Shut Down
32-4n-10w Roll, Cochran & Abernathy 1.
35-4n- 9w Warehime, Daisey Bell Oil 1.
4-3n-10w Saunder, Cook & Graham 1.
20-2n-10w School, Ashcraft et al 1.
14-1n-12w Wilson, Green et al 1.
29-1n-12w Bentley, Bentley et al 1.
5-1n-10w Neeley, P. W. Appleby, Jr., 1.
Rigs, 1; wells drilling, 20; total, 21.

PONTOTOC AND GARVIN COUNTIES
Rigs
17-4n-6e Phillips, Bryan et al 2.
28-4n-7e Faulkner, Hughes et al 3.
8-1n-3w Deryden, T. P. C. & O. Co. 3.
17-1n-3w Deryden, Carter Oil 8.
31-1n-3w Bun, Magnolia Pet. 1.
Wells Drilling
25-5n-6e Patterson, Gillette & Krueger 1.
11-4n-7e Norris, N. B. Haney et al 1.
35-3n-2e Franklin, T. P. C. & O. Co. 1.
27-2n-1w Pool, Empire G. & F. 1.
16-1n-3w Harris, Magnolia Pet. 8, 12.
17-1n-3w Deryden, The Texas Co. 1-B, 2-B.
20-1n-3w Deryden, Markham et al 1.
Shut Down
28-5n-5e Copeland, La Salle et al 1.
14-4n-7e Norris & Beck, Howarth O. & G. 1.
32-3n-3e Hensley, Cosden et al 1.
28-3n-4e Lloyd, O. F. Smith 1.
Rigs, 5; wells drilling, 13; total, 18.

STEPHENS AND COTTON COUNTIES
Rigs
10-2n-9w Waters, Homaokla Oil 1.
25-2n-4w Gann, Gant et al 1.
5-1n-9w Borevarski, Red Seal Ref. 1.
32-1s-10w Fink, Garvin & Urice 1-A.
18-1s-8w Johnson, John Farrett 1-A.
20-1s-8w Brittian, Malernee & Dunlap 2.
Brittian, Safety First Oil 8.
3-2s-5w Harris, Magnolia Pet. 3.
Wells Drilling
6-2n-8w Johnson, Hoffer Oil 1.
2-2n-5w Green, Carter Oil 2.
12-2n-5w Iserwood, Carter Oil 3.
14-2n-5w Truitt, Rogers et al 2.
7-2n-4w Simms, Green et al 1.
22-2n-4w Morris, F. Phillips & Barnsdall Oil 1.
25-1n-9w Harris, Magnolia Pet. 11.
19-1n-8w Funk, Ill-Okla Oil 1.
30-1n-8w Hardin, Carter Oil 7.
31-1n-8w Heiser, Kinsey Law et al 3.
32-1n-5w Charleston, Magnolia Pet. 2.
21-1s-10w Johns, McBee & Peacock 1.
25-1s-9w D. Russell, Magnolia Pet. 8.
20-1s-8w Brittian, J. R. McQueen 5.
D. Bartley, Magnolia Pet. 11.
28-1s-8w Taliaferro, Carter Oil 1.
Nelson, V. A. Kidney 2.
Springer, Winkler & McQueen 5.
Taliaferro, Winkler & McQueen 1-A.
29-1s-8w Stephens, Magnolia Pet. 2.
33-1s-8w Glass, Magnolia Pet. 6.
26-1s-6w Skelly, Skelly Oil 28.
34-1s-5w Ziegler, Magnolia Pet. 18.
12-2s-8w Fobb, Commercial Pet. 11.
34-2s-7w Yates, Hawks & Ware 1.
3-2s-5w Harris, Magnolia Pet. 2.
11-2s-5w Ed Martin, Magnolia Pet. 4.
8-2s-4w Cobb, Magnolia Pet. 9.
12-3s-7w Porter, Harry Hanbury 1.
Shut Down
10-2n-4w Conner, Danciger Oil 1.
31-2n-4w Jefferson, Lewis Clarke Pet. & Montgomery 1.
23-1n-9w Brown, Steve Linson 4.
25-1s-9w Russell, Magnolia Pet. 1.
28-1s-8w Voss, Guy Brown 4.
29-2s-7w Bristow, Womac 1-A.
12-4s-10w Cooper, W. B. Lindsey 1.
Rigs, 8; wells drilling, 36; total, 44.

JEFFERSON COUNTY
33-6s-5w Seay, Gypsy Oil 29.
1-7s-4w Cassidy, New England O. & P. L. 1.
7-4s-8w Holley, Josey Oil & Griffith 1.
Wells Drilling
5-4s-6w Hunton, Homaokla Oil 1.
13-4s-4w Hardin, Twin State Oil 1.
31-6s-5w Seay, Simpson, Fell & Sigler 1.
33-6s-5w Seay, A. C. Brown 6.
18-7s-5w James, Humble O. & R. 1.
33-6s-5w Seay, Gypsy Oil 26, 27, 28.
19-7s-5w Alexander, Humble O. & R. 1.
25-7s-4w Black, Pender Prod. Co. 1.
Shut Down
34-5s-6w Major, Ascot Oil 1.
23-7s-7w Hayes, L. C. Hivick 1.
5-7s-5w O. Seay, Woodruff Bros. 1.
Rigs, 3; wells drilling, 13; total, 16.

CARTER COUNTY
Rigs
18-1s-3w Hardin, Magnolia Pet. 2.
33-1s-3w Bumpass, Magnolia Pet. 4.
Bumpass, Humble O. & R. 1.
34-1s-3w Fish, Magnolia Pet. 7.
3-2s-3w Adams, Magnolia Pet. 1.
Pruitt, Wirt Franklin & Prairie 3, 6, 7.
22-2s-3w Morris, Magnolia Pet. 1.
23-2s-3w Lohman, Magnolia Pet. 10.
8-2s-2w Pierce, Skelly Oil 3.
15-2s-2w Johnson, Magnolia Pet. 2.
Wilson, Magnolia Pet. 2.
17-2s-2w Riley, Humble O. & R. 1.
34-1s-3w Snyder, Westheimer 3.
Wells Drilling
18-1s-3w E. Hardin, Magnolia Pet. 2.
19-1s-3w Jordan, Humble O. & R. 4.
Winters, Magnolia Pet. 1-A.
31-1s-3w Moore, Magnolia Pet. 1.
33-1s-3w Bumpass, Magnolia Pet. 2.
Bumpass, Cameron Ref. et al 1.
Lusk, Humble O. & R. 4.
24-1s-3w Snyder, Humble O. & R. 2, 3.
Hernstadt, Gilmer 2, 3.
McClish, Gypsy Oil 2.
Fish, Magnolia Pet. 3, 4, 5, 6.
Newstadt, Magnolia Pet. 3.
Sikes, Schermerhorn et al 1.
Gault, Simpson & Fell 1.
Parnell, Simpson & Fell 2, 3.
Snyder, Westheimer 2.
2-2s-3w Calvery, Schermerhorn 1.
3-2s-3w Lyles, Gypsy Oil 1, 2.
Carpenter, Magnolia Pet. 1.
Pruitt, Wirt Franklin & Prairie 5.
4-2s-3w Johnson, Humble O. & R. 1.
Suiter, Humble O. & R. 1.
10-2s-3w Grimes, Wirt Franklin 1.
15-2s-3w Carpenter, Mid-Cont. Pet. 1.
22-2s-3w Kimbrall, Carter Oil 3.
22-2s-3w Carpenter, C. R. Smith 1.
23-2s-3w M. Williams, Magnolia Pet. 1.
McClain, Magnolia Pet. 1.
32-2s-3w Johnson, Sturm Drlg. Co. 1.
Feagin, Sturm Drlg. Co. 2.
6-2s-2w Higgins, Coline Oil 6.
7-2s-2w Pierce, Coline Oil 9.
Higgins, Coline Oil 5, 9.
Watkins, Iowa Oil 2.
Caughman, Roxana Pet. 1.
8-2s-2w Pierce, Carter Oil 2.
Higgins, Coline Oil 8.
Pierce, Skelly Oil 1, 2, 4.
15-2s-2w Pierce, Magnolia Pet. 1.
Cox, Magnolia Pet. 1.
16-2s-2w Higgins, Roxana Pet. 1-B.
Cox, Magnolia Pet. 2.
17-2s-2w Moore, Skelly Oil 1.
23-2s-2w Noble, Magnolia Pet. 1.
27-2s-2w Noble, F. W. Merrick et al 3.
8-3s-2w Moyer, Merrick-Cameron 7.
Watkins, Schermerhorn 4.
26-3s-2w Westheimer, Shell et al 1.
16-4s-2w Shellenburg, Magnolia Pet. 12.
1-4s-3e Barnes, Humble O. & R. 1.
35-5s-1w Joy, Humble O. & R. 1.
3-5s-1e Dove, Schermerhorn et al 1.
20-5s-1e Baptiste, Amerada Pet. 24, 25, 28.
24-5s-1e Jelliff, Schermerhorn et al 1.
28-5s-1e Westheimer, Amerada Pet. 15.
Shut Down
19-1s-2w Morris, McGee 1.
22-2s-3w Calvery, Wirt Franklin 1.
7-2s-2w Watkins, Iowa Oil 1.
25-2s-2w McCoy, Hivick et al 1.
8-3s-2w Fitzgerald, F. W. Merrick et al 1.
22-4s-2w Dillard, Baker & Strawn 12.
13-5s-3w Beal, Wickenhiser 1.
Rigs, 15; wells drilling, 74; total, 89.

MISCELLANEOUS COUNTIES
Rigs
Harper County—
30-29-22w ——, D. T. Water 1.
Woodward County—
4-23-17w Nordyke, Diamond Drlg. Co. 1.
Logan County—
11-18-3w Matthews, Santrock Drlg. Co. 1.
Kingfisher County—
20-15-8w Otis, Hoffman et al 1.
23-15-5w Davidson, Reiter-Foster Oil 1.
Oklahoma County—
7-14-3w ——, J. V. Bailey 1.
17-14-2w Lynn, Von Stein & Hagerling 1.
13-13-1w Martin, E. A. Hawley & Rosser 1.
Sequoyah County—
32-11-25e Miller, Sequoyah Gas Co. 1.
Beckham County—
21-9-23w Roberts, W. D. Sheddon 1.
Caddo County—
23-5n-11w ——, Abernathy et al 1.
Marshall County—
24-5s-5e Arbuckle, United Eight Oil 3.
Love County—
2-6s-1e Carlock, Schermerhorn 1.
25-6s-2e Dillard, Schermerhorn 1.
Wells Drilling and Shut Down
(Shut Down Wells Indicated by *)
Harper County—
14-25-22w Cooper, Hoffer Oil 1.
Ellis County—
32-24-24w Meehan, Utility O. & G. 1*.
Major County—
26-22-14w Cheyenne Basin, The Texas Co. 1*.
36-21-11w Gray, Frantz & Slick 1.
Woodward County—
34-20-20w ——, Small & Hennessey 1*.
Logan County—
33-19-4w ——, Bryant & Emery 1.
28-18-4w Moore, Franklin Oil Assn. 1*.
33-18-3w Quier, Haley & Pioneer Pet. 1*.
28-16-1w Lair, Blackford O. & G. 1*.
28-17-1e Woods, T. B. Slick 1.
Dewey County—
7-18-15w Chronister, Meyers 1*.
9-18-15w Perfect, Huckleby-McCoy 1*.
Kingfisher County—
12-18-5w2——, Marland Oil 1.
6-16-7w Canfield, Pet. Eng. Core Drill Co. 1.
Blaine County—
21-15-10w Eklemier, Okoma Oil 1*.
Canadian County—
9-14-6w Piatt, A. D. Spears et al 1*.
34-13-9w Dawson, Thos. Revelle 1.
2-13-8w Setter, Carroll & Zweicher 1*.
29-11-7w Sanders, O. D. Jones 1*.
Oklahoma County—
15-14-2w Myer, Red Seal Ref. Co. 1.
9-14-1w Miller, Maxine Pet. 1*.
10-12-3w Edwards, Cromwell O. & G. 1.
Texas County—
32-5n-12e Havey, Valerius O. & G. 1.
21-4n-14e Hovey, Wilcox O. & G. 1.
18-3n-12e Hughes, Valerius O. & G. 1.
28-3n-13e Del, Wilcox O. & G. 1.
9-3n-15e ——, Reiter-Foster Oil 1.
10-2n-11e ——, Feiter-Foster Oil 1.
4-1n-12e ——, Haley, Garber & Pulse 1.
McIntosh County—
2-12-15e McIntosh, Beggs O. & R. 1.
12-11-14e Richards, Tiger Mtn. Oil 1.
Sequoyah County—
15-11-26e Hicks, Citizens Gas Co. 1.
24-10-25e Barrow, Orr et al 1.
Pittsburg County—
32-9n-16e Smith, J. L. Pattison 1.
8-2n-16e Wilkins, Baker & Hailey 1*.
Haskell County—
10-9n-18e Sanders, Marion Oil 1*.
Latimer County—
7-5n-18e Hunt, P. & F. Pet. 1.
Pottawatomie County—
26-11-4e Kline, Sikes, Kilgore & Shaffer 1.
12-10-3e Ives, Sikes, Kilgore & Shaffer 1.
25-10-4e Madgett, J. W. McCulloch, Inc. 1.
28-10-4e Toney, Central National Oil 1*.
16-10-5e School land, Clark Edwards et al 1*.
16-9n-5e School land, Gypsy Oil 1.
3-8n-4e Kenyon, Tidal Osage Oil 1.
15-7n-4e Standridge, Derby Pet. 1.
19-7n-4e Neghan, Croxton & Bucklin 1*.
10-6n-2e MaGahey, Davis Detrick et al 1.
20-6n-4e Hibbard, Croxton Wrightsman et al 1*.
Beckham County—
24-9n-25w ——, W. H. Sheldon 1.
25-8n-22w McGee, W. R. Duke 1*.
Van Vector, Kadane et al 1*.
Kiowa County—
5-6n-18w Bonham, A. C. Varner 1.
6-2s-16w ——, Landfair 1.
Caddo County—
3-6n- 9w Abernathy, English Drlg. Co. 4.
Gaffney, English Drlg. Co. 1.
33-6n- 9w Ester, Briscoe & Hall 1.
29-5n-12w Galbreath, W. J. Hartley 1*.
5-5n- 9w Stevens, Magnolia Pet. 2.
10-5n- 9w Bigley, Briscoe & Hall 1.
12-5n- 9w Wagner, Gorton Trust Co. 5.
Tillman County—
13-1s-18w Snelling, Oasis Oil 1*.
1-5s-15w Riverbed, Tipton et al 1*.
Murray County—
4-2s3e Olson, Humble O. & R. 1.
Johnson County—
26-4s-5e Chastain, Deese et al 1*.
Atoka County—
17-4s-11e Dabney, Hanson et al 1*.
Marshall County—
17-5s-5e Sacra, Kennedy Drlg. Co. 1.
21-5s-5e Sacra, Gill et al 1*.
24-5s-5e Arbuckle, United Eight Oil 6.
Love County—
10-6s-3w Laten, R. M. Boring et al 1.
7-6s-2e Brown, Magnolia Pet. 1.
28-6s-2e Fee, Westheimer 1.
Mayes County—
20-20-e Longcrier, J. C. Fore & F. R. Shepard 1.
8-20-19e Drew, J. L. Dixon 1.
Rigs, 14; wells drilling, 75; total, 89.

KANSAS FIELDS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Anderson	17	1,265	1	0
Butler	32	1,095	13	1
Chautauqua and Elk	10	297	1	1
Cowley	12	655	2	0
Greenwood	69	9,865	11	0
Lyon	19	1,035	9	0
Miscellaneous	36	1,917	14	4
Total June	195	16,129	51	6
Total May	165	16,230	57	4
Difference	30	101	6	2

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Butler	11	50	61
Chase	3	5	8
Chautauqua and Elk	3	25	28
Coffey	2	6	8
Cowley	8	25	33
Greenwood	49	80	129
Kingman	1	13	14
Lyon	12	29	41
Montgomery	..	12	12
Rice	4	10	14
Sumner	1	14	15
Woodson	4	8	12
Miscellaneous	14	87	101
Total June	112	364	476
Total May	90	381	471
Difference	22	17	5

ANDERSON COUNTY
WELLS COMPLETED

34-21-19	Melville, J. T. Graham 13	40
18-21-21	Crozier, Peerless Oil of Kans. 4	70
33-20-21	Kretchmer, McGill et al 3	45
	Cleveland, McGill et al 5	140
	Kretchmer, McGill et al 5	70
	Jackson, McGill et al 9	70
4-21-21	Connelly & Loriaux, Southwestern Pet. 20	40
	Connelly & Loriaux, Southwestern Pet. 21	80
	Connelly & Loriaux, Southwestern Pet. 22	dry
28-20-21	Little, Doering et al 2	50
	Little, Doering et al 3	40
	Little, Doering et al 4	50
33-20-21	Kretchmer, McGill et al 2	100
	Cleveland, McGill et al 6	100
	M. Kretchmer, McGill et al 6	100
	M. Kretchmer, McGill et al 7	110
	M. Kretchmer, McGill et al 8	160
	Wells completed	17
	Production	1265
	Dry	1

BUTLER COUNTY

31-23-8e	Walking, Manhattan Oil 1	dry
27-26-7e	Wilhite, Connell Oil 3	dry
	Young, Empire G. & F. 3	150
25-27-4e	Skaer, Magnolia Pet. 4	15
22-27-7e	Truesdale, The Texas Co. 2	dry
27-27-7e	Kruse, Amerada Pet. 6	160
	Truesdale, Phillips Pet. 7	50
	Truesdale, Phillips Pet. 8	75
33-27-7e	Laughlin, Lewis Oil 3	10
32-26-6e	Schoenrock, Sparta Drlg. Co. 2	25
30-26-8e	Drum-Hitler, Abel et al 2	30
	2-27-5e Smock "A," Sitran Bros. 1	15
	7-27-6e Kistler, Gypsy Oil 1	dry
22-27-7e	Barnhill, Sinclair Oil 4	150
27-27-7e	Phillips-Kruse, Phillips Pet. 1	60
33-27-7e	Laughlin, Federal Oil 7	30
	Laughlin, Federal Oil 8	dry
20-23-4e	Parris, Ark. River Gas Co. 12	10
29-25-4e	Varner, Tatlock & Vickers 1	120
22-27-7e	Tobler, Flack, Davidson et al 4	80
22-28-6e	Pettet, Connell et al 1	dry
19-29-5e	Sutton, Shawyer et al 1	dry
	3-22-12 Ames, Prairie O. & G. 1	20
36-24-4e	Barkmyer, Robinson et al 1	dry
29-24-7e	Potts, Manhattan Oil 1	dry
24-27-4e	Weidline, Weidline et al 1	gas
27-27-7e	Truesdale, Dixie Oil 3	75
21-28-6e	Pettet, Mid-Kansas O. & G. 1	dry
34-28-6e	Powers, Manhattan Oil 1	dry
3-29-7e	Arnold, Landon et al 1	dry
17-29-7e	Brown, White Eagle et al 1	dry
33-29-8e	Hanna, Roth & Co. 9	20
	Wells completed	32
	Production	1095
	Dry	13
	Gas	1
	Gas production	500,000

CHAUTAUQUA AND ELK COUNTIES

28-32-10	McAllister, Watchorn O. & G. 3	15
23-31-10	Webb, Theta Oil Co. 1	150
20-34-9e	Townsend, Treese Oil 1	12
15-31-9e	Davis, Kansas Central O. & G. 1	gas
19-31-9e	Newbecker, Anglo Texas Oil 2	20
13-31-10	Webb, Pure Oil 7	35
14-31-10	Chaffine, Pure Oil 10	10
35-31-11	Ayers, Abel, Byington et al 1	dry
22-31-10	Rorick, Gillespie 3	25
27-31-10	Walker, Theta Oil 4	30
	Wells completed	10
	Production	297
	Dry	1
	Gas	1
	Gas production	5,000,000

COWLEY COUNTY

10-31-3e	Shaffer, Benedum & Trees 5	35
24-32-4e	Wallace, J. A. Hull 15	275
25-32-4e	Lierman, Gypsy Oil 1	15
18-32-5e	Barnette, Gypsy Oil 1	45
16-33-3e	Hunt, Gypsy Oil 2	35
16-34-3e	Chapman, Roxana Pet. 2½	dry
24-34-6e	Day, S. H. E. Pet. Co. 1	25
19-32-3e	Carson "A," T. B. Slick 3	50
3-32-5e	Elrode, Empire G. & F. 3	15
19-32-5e	Boyd, Duffield et al 3	100
5-34-3e	Martin, Gypsy Oil 1	40
20-34-8e	Burkett, Watchorn O. & G. 1	dry
	Wells completed	12
	Production	655
	Dry	3

GREENWOOD COUNTY

12-22-10	De Malorie, Davis, Hazlett et al 17	400
29-22-10	Prather The Texas Co. 7	200
26-23-8e	Moaby, Phillips Pet. 4	dry
11-23-9e	Green, McGinnis et al 2	150
15-23-9e	Bradford-Teter, Phillips Pet. 6	135
	Teter, Skelly Oil 6	350
23-23-10	Allen, Mid-Kansas Oil 27	50
4-23-11	Cragen, Phillips Pet. 3	dry
	Yeager, Skelly Oil 2	135
3-23-12	——, Simmons et al 1	dry

28-23-13 Dehlinger "A." Mid-Cont. Pet. 4 25
Dehlinger "A." Mid-Cont. Pet. 5 40
19-24-11 Lindamood, Ritchey, Moore et al 5 10
24-26-9e Weirshing, Beacon Oil 4 150
1-22-10 Fuller, Syndicate Oil 2 1000
6-22-10 Atyeo, Empire G. & F. 7 535
9-22-10 Pixlee, Theta Oil 9 dry
12-22-10 Austin, Syndicate Oil 4 300
20-22-10 Prather "A," Skelly Oil 2 100
29-22-10 Prather, The Texas Co. 8 50
15-22-11 Bartlett, Empire G. & F. 5 65
4-22-12 Fankhouser, Fisher, Lauck et al 3 20
Fankhouser, Mid-Cont. Pet. 1 60
Fankhouser "B," Simmons et al 7 400
Fankhouser "C," Simmons and The Texas Co. 2 210
Fankhouser, Simmons and The Texas Co. 3 25
Fankhouser, The Texas Co. 1 40
24-23-8e Scott "C," Manhattan Oil 2 dry
25-23-8e Craft Taylor, Manhattan Oil 9 100
Dales "B," Manhattan Oil 11 25
19-23-9e Green, Manhattan Oil 23 100
26-23-11 Ellis, Simmons and Amerada Pet. 2 90
26-24-9e Wiggins, Polhamus et al 4 dry
19-25-10 Henley, Elwell et al 1 dry
12-22-10 Fechter, Prairie O. & G. 3 140
1-23-9e Shambaugh, Prairie O. & G. 2 50
1-23-10 Fuller, Day et al 2 750
8-22-10 Pixlee, Theta Oil 10 50
Pixlee, Theta Oil 11 75
19-22-10 Browning, Sinclair Oil 40 dry
29-22-10 Prather, Tidal Oil 4 200
15-22-11 Bartlett, Empire G. & F. 6 35
19-22-11 Harris, Simmons et al 4 5
32-22-11 O'Neil, York State Oil 9 150
4-22-12 Fankhouser "A," Simmons et al 7 150
Fankhouser, The Texas Co. 2 75
5-22-12 Lewis, Phillips Pet. 1 dry
19-23-9e Morris, White Eagle et al 7 150
27-23-13 Schnidler, Mission Oil 7 15
29-23-13 Dehlinger "B," Mid-Cont. Pet. 11 10
19-24-11 Lindamood, Ritchey Moore & W. E. 2 45
30-24-11 Wiggins "C," McGinnis et al 5 100
20-25-9e Ladd, Mid-Kansas Oil 8 100
8-22-10 Pixlee, Theta Oil 12 50
29-22-10 Prather, Tidal Oil et al 18 330
Prather, Tidal Oil et al 19 75
4-22-12 Fankbouser "B," Simmons et al 1 300
11-22-12 Young, Shaffer & Howell 1 dry
25-23-8e Scott, Hayes, Robertson et al 13 125
Scott, Hayes, Robertson et al 14 125
10-23-9e Green, Manhattan Oil 24 125
8-23-11 Oliver, Pure Oil 3 140
20-23-13 Burris, Ark. Fuel Oil 5 60
19-24-11 Freeman, Phillips Pet. & Manhattan 1 500
30-24-11 Wiggins "A," McGinnis et al 5 600
Wiggins "B," McGinnis et al 4 500
6-24-12 Shook, Syndicate Oil 1 20
23-26-9e Weirshing, Flintridge Pet. 2 60
26-27-10 Forbes, D. Ely et al 1 dry

Wells completed 69
Production 9865
Dry 11

LYON COUNTY

6-16-12 Putman, Manhattan Oil 1 dry
31-21-10 Atyeo, Sheedy et al 6 135
35-21-10 Voorhees, Southwestern Pet. 1 dry
31-21-11 Huntsinger, Rhodes, Parkens et al 1 dry
5-21-10 Ewers Ranch, Prairie O. & G. 1 dry
24-20-10 Stilwell, Garden, Staats et al 1 dry
7-20-13 Evans, Haverland et al 1 dry
30-21-10 Atyeo, Transcontinental Oil 3 125
31-21-10 Atyeo "A," Transcontinental Oil 1 200
Atyeo "A," Transcontinental Oil 2 150
35-21-12 French, Phillips Pet. 1 dry
20-19-12 Breckiman, Denton & Osenback 1 dry
30-21-10 Jones, Theta Oil 1 50
31-21-10 Atyeo, Sheedy et al 7 50
33-21-12 Lauck, Phillips Pet. 10 100
Lauck, Phillips Pet. 11 100
32-20-10 Flyn, Sheedy et al 1 dry
30-21-10 Atyeo, Transcontinental Oil 5 80
31-21-10 Atyeo, Transcontinental Oil 3 45

Wells completed 19
Production 1035
Dry 9

MISCELLANEOUS COUNTIES

Allen County—
21-26-21 Miner, H. S. Parrott et al 1 dry
22-25-21 Broughton, W. H. Noble et al 3 100
21-25-21 Duggan, Bert Featherline et al 9 gas
Coffey County—
5-19-14 Gaddis, McMahon & Lenord 1 dry
18-21-14 Wilson, Kimbley Pet. 1 dry
23-21-16 Wade, Scott Creek Oil 1 dry
Marion County—
13-21-4e Ryan, Sheedy et al 1 500
14-21-4e Coyne, Cornell & Co. 1 dry
24-21-4e Allison, Sheedy et al 5 dry
29-19-5e Collinge, Frank Allen et al 1 dry
17-21-5e Jeffers, Prairie O. & G. 17 dry
Montgomery County—
17-34-14 Neiswenger, Western O. & G. Co. of Mo. 1 7
18-34-14 Gilmore, King & Myers 3 5
8-34-17 Barber, Jesse Graham 14 10
23-34-15 Fee, O. O. Crane et al 5 dry
15-32-15 Dwyer, Hatfield & Beeler 1 15
34-33-15 Hackmaster, Jno. Lindberg et al 1 dry
15-32-15 Kleinhaven, Beeler et al 1 gas
21-33-16 Riley, Roth & Farout 1 dry
12-31-16 Barsch, P. H. Freel 19 20
29-30-16 Kimball, C. R. Mong 20 25
9-34-14 Eaton, Gillespie 1 dry
Neosho County—
15-28-18 Flottman, Wells & Breyfogle 4 5
Rice County—
35-20-6w Welch, Prairie O. & G. 2 75
Welch, Prairie O. & G. 1 150
2-21-6w Jacobson, United Refg. 1 150
Walstein, Youker et al 1 130
Russell County—
32-11-15w Dodge, Derby Oil et al 3 130
17-12-15w Oswald-Valerius, Valerius O. & G. 18 200
18-12-15w Mermis, Valerius O. & G. 1 215
Stafford County—
23-21-11w Sifers, King & Langston 1 dry
Sumner County—
34-34-2e Post, Prairie O. & G. 1 80
Wabaunsee County—
29-14-11 Young, White Drlg. Co. 1 dry
Wilson County—
34-27-16 Marple, Frank Minister 1 gas
Woodson County—
6-24-14 Wintersheld, Pure Oil 10 100
9-25-14 Stephenson, Fields Cross et al 1 gas

Wells completed 36
Production 1917
Dry 14
Gas 4
Gas production 4,945,000

BUTLER COUNTY
Rigs
30-26-6e McClure, Washabaugh, Foraker et al 1
25-27-4e Skaer, Magnolia Pet. 5.
26-27-4e Safford, Safford et al 3.
35-27-4e Skaer, Empire G. & F. 16.
23-27-7e Harris, Mid-Kansas Oil 2.
27-27-7e Tobler, Empire G. & F. 3.
3-28-6e Gibson, Shawver & Sutter 1.
30-28-7e Jones, Herron et al 1.
7-29-4e Holcomb, Producers Pet. 1.
21-29-4e Holcomb, Wilcox E. et al 1.
28-29-6e Steinhoff, Gled Oil 2.
Wells Drilling
33-27-7e Farner, Prairie O. & G. 1.
12-23-6e Sickles, Phillips Pet. 1.
19-23-8e Sturgeon, Tom Miller et al 1.
25-24-6e Daley, Manhattan Oil 1.
34-25-5e Geddis, Connell et al 1.
9-26-5e Boyer, Empire G. & F. 19.
35-26-5e Bisagno, Sitrin et al 7.
8-26-6e Kimball, Kismet Oil 1.
27-26-7e Young, Empire G. & F. 4.
Ellsworth, Phillips Pet. 2.
Wilhite, White Eagle O. & R. 5, 6.
16-26-8e Dickinson, Tidal Oil and Great Southern 34.
30-26-8e Drum-Bitler, Cowpunchers Oil 3.
35-27-4e Starkey, Empire G. & F. 10.
14-27-5e Zeiset, H. H. Patton 1.
21-27-5e Brower, Holl et al 1.
33-27-5e Clark, Neeley O. & G. 1.
8-27-6e Dedrich, Richmond Drlg. Co. 1.
11-27-6e Nixon, Kismet Oil 1.
27-27-6e Stern, Derby Oil et al 1.
33-27-6e Shriver, H. H. Patton 1.
34-27-6e Schriver, Magnolia Pet. 1.
36-27-6e Figge, Liggett et al 2.
12-27-7e Seward, White Eagle et al 1.
19-27-7e Steffins, Connell, Sheldon et al 1.
22-27-7e Harris, Mid-Kansas Oil 2.
Barnhill, Sinclair Oil 5.
23-27-7e Barnhill, Flack et al 2.
25-27-7e La Port, Shaeldon, Connell et al 1.
27-27-7e Kruse, Amerada Pet. 7.
Truesdale, Dixie Oil 4, 5.
34-27-7e Bateman, Dixie Oil 1.
6-27-8e Lucas, Jno. Rogers 2.
2-28-6e McCollough, Mathews et al 1.
3-28-6e Kramer, Allison & Fitzwilliams 1.
Blackman, Johnson et al 1.
Gibson, Markham et al 1.
Gibson, Phillips Pet. 1.
Gibson, The Texas Co. 1.
13-28-6e McCraig, Farr et al 1.
16-28-6e Cotton, Magnolia Pet. 1.
17-28-6e Pettet, Phillips Pet. 1.
20-28-6e Pettet, Magnolia Pet. 2, 3.
12-29-6e Keneyon, Tobin et al 1.
Wells Shut Down
30-23-7e Swiverly, Templeman, Frants et al 1.
22-25-7e Collins, Liggett et al 1.
34-29-4e Burch, Smith & Ash 1.
Rigs, 11; wells drilling, 50; total, 61.

CHASE COUNTY
Rigs
9-21-8e Sharp, Crandall, Murta et al 1.
1-21-9e Richards, Manhattan Oil 1.
36-22-7e Frew, Taylor et al 1.
Wells Drilling
25-18-6e Lipps, Preston & Pasewalk 1.
15-20-9e Johnson, Phillips Pet. 1.
24-22-8e Eastman, Skelly Oil 1.
36-22-9e Shambaugh Mid-Kansas Oil 3.
Wells Shut Down
16-20-7e Nichols, Vickers Pet. 1.
Rigs, 3; wells drilling, 5; total, 8.

CHAUTAUQUA AND ELK COUNTIES
Rigs
3-31-8e Denton, Minnehoma Oil 1.
20-31-11 La Ville, Gillespie Oil 1.
20-33-12 Conner, Prairie O. & G. 5.
Wells Drilling
31-32-10 McKnown, Foster Oil, Harsp & Craven 1.
21-32-11 McCarty, Robinson et al 1.
33-32-11 Burch, Skow Bros. 1.
5-33-9e Carr, Brouck et al 1.
13-29-8e Hanna, Roth & Co. 10.
17-29-10 Tayler, Ark. Fuel Oil 2.
11-29-11 Ebel, Watson et al 1.
18-29-11 Nuttle, Selby O. & G. 1.
3-30-9e Denton, Watchorn O. & G. 9.
3-30-12 Willard, Theta Oil 2.
13-31-10 Webb, Pure Oil 8, 9.
14-31-10 Leffingwell, Union Gas Corp. 5.
Webb, Union Gas Corp. 13.
22-31-10 Rorick, Gillespie 4.
23-31-10 Webb, Theta Oil 3.
27-31-10 Murphy, Theta Oil 1.
33-31-10 Webb, Landon et al 1.
20-34-9e Townsend, Prairie O. & G. 1.
26-34-11 Hartzel, Prairie O. & G. 8.
Wells Shut Down
11-32-10 Jeaneret, Griffith-Strueb Oil 1.
7-32-11 Chaffine, Mitchell, Frazier et al 1.
7-33-10 Briggs, Noble O. & G. 1.
4-29-9e Britton, Tolbot & McCullough 1.
29-31-10 Rettig, Neeley O. & G. 2.
Rigs, 3; wells drilling, 26; total, 28.

COFFEY COUNTY
Rigs
2-20-13 Milner, Terrian, Balliere et al 1.
2-23-13 Luthi, McDougal et al 1.
Wells Drilling
25-20-13 Stuart, Connell et al 1.
29-20-17 Pierson, Connell et al 1.
14-21-13 O'Meara, Ritchey & Moore 1.
12-22-13 Weldon, Moore et al 1.
36-22-14 Reed, Bement Oil 1.
Wells Shut Down
14-23-16 Jones, Fidelity Oil 1.
Rigs, 3; wells drilling, 25; total, 28.

COWLEY COUNTY
Rigs
2-31-4e Goodrich, Twin State Oil 1.
29-31-5e Wickliffe, Roth, Farout et al 1.
12-32-4e Leirman, Marland Oil 2.
22-32-4e Shannon, Gypsy Oil 10.
24-32-4e Lewis, J. A. Hull 4.
7-32-5e Crosby, Ark. Fuel Oil 5.
20-34-3e Surtz, Wilt & Shawver 1.
24-34-6e Day, S. H. E. Pet. 2.
Wells Drilling
15-30-4e Newton, Smith & Ash 1.
14-30-6e Hulmes, Grey, Hewey et al 1.
31-30-6e Robbins, Lewis Oil 5.
35-31-3e Wilson, Ark. Fuel Oil 1.
28-31-4e Lewis, Trees Oil 3.
6-31-6e Eastman, Southwestern Pet. 12.
7-31-6e Eastman, Southwestern Deal 1.
19-32-3e Carson, T. B. Slick 6.
Waite, Carter O. & Oil.
15-32-4e School land, J. A. Hull 1.
24-32-4e Lewis, J. A. Hull 3.
25-32-4e McFadden, Buckeye Oil 3.
19-32-5e Bartlow, J. A. Hull 4.
9-33-3e Graham, Duffield et al 1.
28-33-3e Caldwell, W. Phillips & Marland 12.
36-33-4e Seacat, Roxana Pet. 1.
7-33-7e Riding, Brown Bros. 1.
18-33-7e Smith, Doric Oil 1.
15-34-4e Pollock, Bunnell et al 1.
5-35-5e Sterling, Springstead & Overlease 1.
Wells Shut Down
7-30-6e White, Branson et al 1.
4-31-5e Elliott, Boxer et al 1.
24-33-6e Sandstrum, Little Martha Oil 2.
16-34-5e Hunt, Phillips Pet. 1.
Rigs, 8; wells drilling, 25; total, 33.

GREENWOOD COUNTY
Rigs
1-22-10 Fuller, Day et al 3.
Fuller, Syndicate Oil 3.
Bradfield, Syndicate Oil 2.
6-22-10 Atyeo, Empire G. & F. 9, 10.
8-22-10 Pixlee, Mid-Kansas Oil 5.
12-22-10 Austin, White Eagle et al 4.
11-22-10 Green, Phillips Pet. 1.
12-22-10 Warrensburg, Phillips Pet. 7.
19-22-10 Browning, Sinclair Oil 44.
20-22-10 Browning, Sinclair Oil 41, 43.
29-22-10 Prather, The Texas Co. 9, 10.
Prather, Tidal Oil et al 25.
30-22-10 Nichols, Tidal Oil 4.
9-22-11 Minot, Orlando Pet. et al 1.
14-22-11 Killison, Empire G. & F. 8.
32-22-11 De Malorie "C," York State Oil 11.
4-22-12 Fankhouser, Fisher, Lauck et al 4.
Fankhouser "B," Simmons et al 2.
9-22-12 Holderman, Simmons et al 1.
Holderman, Titus et al 1.
8-22-13 Tatum, Enterprise Dev. Co. 1.
27-22-13 Miller, Braden Bros. & Braden 6.
24-23-8e Scott "C," Manhattan Oil 3.
25-23-8e Scott, Manhattan Oil 2, 3.
36-23-8e Burke, The Texas Co. 1.
1-23-9e Shambaugh, White Eagle O. & R. 1.
10-23-9e Green, Manhattan Oil 25.
11-23-9e Green, McGinnis et al 4.
16-23-9e Teter, Empire G. & F. Co. 35.
25-23-9e Marshall, Rhodes & Ables 1.
32-23-10 Thrall, Roth, Farout & Manhattan Oil 58.
26-23-11 Ellis, Mid-Cont. Pet. 1.
29-23-11 Wilson, Sharpless et al 1.
10-23-13 Souder, Theta Oil 13.
16-23-13 Burris, Parrish et al 1.
28-23-13 Dehlinger "A," Mid-Cont. Pet. 6.
19-24-11 Freeman, Manhattan & Phillips 2, 3.
Lindamood, Manhattan Oil et al 2, 3.
Lindamood, White Eagle O. & R., Ritchie & Moore 6.
30-24-11 Wiggins "B," McGinnis et al 5.
30-25-9e Hoffman, Mid-Kansas Oil 3.
7-27-9e Riley, Empire G. & F. 2.
12-22-10 Fechter, Prairie O. & G. 5.
Wells Drilling
12-22-10 Fechter, Prairie O. & G. 2, 4.
1-22-10 Fuller, Day et al 2.
Fuller, Manhattan Oil 1.
2-22-10 Bradfield, Syndicate Oil 1.
6-22-10 Atyeo, Empire G. & F. 8.
Atyeo, Kanson Oil 4.
8-22-10 Pixlee, Mid-Kansas Oil 4.
12-22-10 De Malorie, Davis, Haziett et al 18, 19, 20.
De Malorie "B," Manhattan Oil 4.
20-22-10 Browning, Sinclair Oil 42.
11-22-11 Hind, Empire G. & F. 8.
Kifper, Empire G. & F. 13.
18-22-11 Clopton, Mid-Cont. Pet. 10.
22-22-11 De Malorie "A," York State Oil 8.
33-22-11 Hillard, Phillips Pet. 8
Westcott, York State Oil 9, 10.
2-22-12 Kusman, Miss. Valley Oil 1.
4-22-12 Fankhouser, Empire O. & F. 2, 3.
Fankhouser "A," Simmons et al 6.
Fankhouser "B," Simmons et al 3, 8.
19-22-13 Bell, Henderson, Holdren et al 1.
26-23-8e Mosby, Phillips Pet. 5.
11-23-9e Green, McGinnis et al 3.
Green, Sheedy et al 8.
15-23-9e Green, Skelly Oil 3.
17-23-9e Morris, Paul et al 1.
19-23-9e Morris, Empire G. & F. 5.
19-23-9e Morris, Manhattan Oil 7.
Morris, White Eagle & Phillips 1.
23-23-9e Teter, Emerald Oil 1.
10-23-10 Smith, Roth, Faurot & Phillips 1.
13-23-10 Piatt, Empire G. & F. 11.
27-23-10 Thall "B", Roth, Faurot & Manhattan 8.
8-23-11 Oliver, Pure Oil 4.
Oliver, The Texas Co. and Simmons 2.
9-23-11 Tiffany, Simmons et al 4.
10-23-11 Riding, Connell et al 1.
16-23-11 Edwards, Manhattan & Phillips 1.
Williams, The Texas Co. 1.
17-23-11 McGolvray, Darby et al 1.
19-23-12 Inthrum, Connell et al 1.
9-23-13 Inthrum, Havehill Pet. 10.
15-23-13 Shadell, Mid-Cont. Pet. 8, 9.
Shadell, Tidal Oil 10.
27-23-13 Schindler, Mission Oil 8.
1-24-9e Cartwright, Roth, Farout & Manhattan 12, 13.
Marshall, Ark. Fuel Oil 15.
19-24-10 Nixon, Sullivan et al 1.
23-24-10 Edwards, Jno. Edwards et al 1.
30-24-11 Wiggins "D," McGinnis et al 2.
7-24-12 Thrall, Enterprise Dev. Co. et al 2.
27-24-13 Story, Skelly Oil 1.
6-25-9e Oleson, Lassen et al 1.
19-25-9e Ladd Acct. No. 5, Mid-Kansas 14.
20-25-9e Ladd Acct. No. 3, Mid-Kansas 9.
19-25-11 Brookover, Fisher, Lauck et al 1.
2-26-8e Stevenson, Tidal Oil 11.
27-26-9e Hodgson, Hiatt, Durham et al 1.
33-27-9e Beaumont, Roth & Farout 1.
9-28-11 Knoll, Owen-Osage 1.
27-26-9e Duke, Smith & Wahn 1.
Wells Shut Down
15-22-11 Clopton, Simmons et al 2.
3-23-9e Noler, Manhattan Oil 1.
28-23-10 Thrall, Roth Faurot et al 57.
25-24-10 Nixon, Davis, O'Flaharty et al 1.
15-24-11 Short, Loy et al 1.
34-24-12 Waldrof, Troxell et al 1.
13-25-8e Welch, Roth & Farout 1.
22-26-9e Duke, Smith, Carlson & Marshall 2.
7-26-10 Edwards, Swift et al 1.
8-27-10 Neubratch, Morgan et al 1.
2-28-11 Schultz, McCollough et al 1.
Rigs, 49; wells drilling, 80; total, 129.

KINGMAN COUNTY
Rigs
11-28-6w Pagett, Marland Oil 1.
Wells Drilling
9-27-6w Hemple, Phillips Pet. 1.
15-27-7w Herman, T. B. Slick 1.
16-27-7w Richardson, Carter Oil 2.
34-27-7w Graber, Fleeger et al 2.
22-28-5w Linholm, Harwood & Winters 1.
31-28-5w Beshare, Crawford & McKenna 1.
13-28-7w Greenleaf, Fleeger et al 1.
35-28-7w Yoeman, Cassoday Oil 1.
16-28-8w McKenna, Phillips Pet. 1.
21-29-9w Schultz, Phillips Pet. 1.
35-30-9w Keiming, Vickers & Stearns 1.
Wells Shut Down
25-27-7w Wilkerson, Allison & Fitzwilliams 1.
4-30-6w Richards, Ozark Drlg. Co. 1.
Rigs, 1; wells drilling, 19; total, 14.

LYON COUNTY
Rigs
25-19-10 Bibermyer, Culp et al 1.
8-19-13 Jacob, Double A Oil 1.
19-19-13 Campbell, Reed et al 1.
24-21-10 Barfinger, Pryor & Lockhart Dev. 1.
30-21-10 Jones, Theta Oil 3.
Atyeo, Transcontinental Oil 6, 9.
31-21-10 Atyeo, Transcontirental 5, 6, 7.
Atyeo, Sheedy et al 10.
29-21-12 Tile, Swartz et al 1.
Wells Drilling
33-17-11 Carr, Wilcox O. & G. 1.
13-17-12 Burnap, Jones Wilhite et al 1.
32-18-10 Bender, Ritchey & Moore 1.
27-18-11 Baker, Markham et al 1.
11-18-12 Rednoor, Abel, Finney et al 1.
20-18-13 Price, Double A Oil 1.
21-18-13 Fuller, Watchorn O. & G. 1.
5-19-11 Parker, Culp et al 1.
35-19-11 Jones, Wilson et al 1.
9-19-12 Morris, Leeward Pet. 1.
11-19-12 Hunter, Derby Oil et al 1.
25-19-12 Cook, Bucher et al 1.
4-20-11 Lewis, Connell et al 1.
7-20-11 James, Wynd & Sinclair Oil 1.
28-20-12 Welch, Connell et al 1.
7-21-10 Richards, Sneedy et al 1.
19-21-10 Hughes, Sheedy et al 1.
24-21-10 Barfinger, McCullough et al 1.
30-21-10 Jones, Theta Oil 2.
Jones, Transcontinental Oil 1.
Atyeo, Transcontinental Oil 4, 8.
31-21-10 Atyeo "A," Transcontinental Oil 4.
Atyeo, Sheedy et al 8, 9.
19-21-11 Rossillion, Emerald Oil 1.
2-21-12 Brewer, Ballard, Burnes et al 1.
18-21-12 Welch, Parkening et al 1.
Wells Shut Down
2-16-10 Frontiman, Ramsey et al 1.
Rigs, 12; wells drilling, 29; total, 41.

MONTGOMERY COUNTY
Wells Drilling
28-34-14 Owens, Phillips Pet. 1.
Wells Shut Down
21-31-14 Faler, Ramler et al 1.
31-32-13 Neiman, Dunn et al 1.
36-32-14 Dryhead, Irish et al 1.
8-32-16 Brinkman, Cowell et al 1.
35-32-16 Wyberger, Bloom et al 1.
29-32-11 Hellum, Earl & Overlease 1.
35-33-16 Felts, Voice & Tabor 1.
4-33-17 Hall, Townsend et al 1.
30-33-17 Bunk, Brown & Wolf 1.
12-35-16 Wilson, Tex-O-Kan Oil 1.
4-35-17 Walker, Gallowye & Roberts 1.
Wells drilling, 12; total, 12.

RICE COUNTY
Rigs
2-19-10w Hollacher, Sparta Drlg. Co. 1.
3-21- 6w Miller, Walstein-Miller Syndicate 1.
35-20- 6w Welch, Prairie O. & G. 3.
34-20- 6w Libby, Prairie O. & G. 1.
Wells Drilling
35-20-6w Welch, Phillips Pet. 1.
Welch, Wilcox O. & G. 1.
2-21-6w Walstein, Youker et al 2.
17-21-6w Brothers, Streeter & Stearns 1.
34-20-6w Wood, Prairie O. & G. 1.
Wells Shut Down
1-19-7w Deed, Pryor & Lockhart 1.
21-20-6w Barnes, Stamey et al 1.
26-20-6w Johansen, Midland Oil 1.
2-21-6w Walstein, Phillips Pet. 1.
11-21-6w Swanson, Youker et al 1.
Rigs, 4; wells drilling, 10; total, 14.

SUMNER COUNTY
Rig
3-32-2e Rice, Stalling et al 1.
Wells Drilling
8-30-2w Lotta, Meridian Gas & Power Co. 1.
36-30-2w Riner, Cosden O. & G. 1.
25-31-2e Churchill, Roxana Pet. 1.
17-32-2e Miller, Barnsdall & Roxana 1.
9-33-2e Wright, Maland Oil 1.
21-33-2e Rutter, Roxana Pet. 1.
24-33-2e Holt, Phillips Pet. 3.
Holt, Sinclair Oil 1, 2.
27-34-2e Spain, Maland Oil 1.
Schart, Wentz et al 1.
18-35-1e Hamilton, Amerada Pet. 1.
13-35-2w Gilbert, Broadhurst et al 1.
Wells Shut Down
35-31-4w Stewart, Sparta Drlg. Co. 1.
Rig, 1; wells drilling, 14; total, 15.

WOODSON COUNTY
Rigs
30-23-14 Collins, Little Seven Oil 1.
23-26-14 Lauck, Peerless O. & R. 3.
Town, Peerless O. & R. 5.
24-26-14 Lauber, McCullough et al 3.
Wells Drilling
23-23-13 Heller, Marland & Christy 10.
35-25-13 Johnson, Altomite O. & G. 1.
19-25-15 Lewis, Blevens et al 1.
23-26-14 Town, Peerless O. & R. 4.
24-26-14 Lauber, McCullough et al 1, 2.
Wells Shut Down
13-25-14 Hunt, Alters et al 1.
13-26-14 Daniels, Bradford & Brimm 1.
Rigs, 4; wells drilling, 8; total, 13.

MISCELLANEOUS COUNTIES
Rigs
Barber County—
13-33-13w Alexander, Shaffer O. & G. 1.
Comanche County—
23-31-18w Starlock, I. M. Rupard et al 1.
Harper County—
22-34-6w Caton, Bu-Vi-Bar 1.
Harvey County—
17-24-3w Boyle, Sinclair Oil 1.
Morris County—
32-14-7e Barber, Kline et al 1.
Ness County—
35-16-21w Ryersee, Bell & Sarton 1.

Osborn County—
19-8-13w Bliss, Krueger et al 1.

Osage County—
14-16-16e Kraft, McMahon, Lenord et al 1.
Pottawatomie County—
17-9-12e Stewart, Crawford et al 1.
31-9-12e Bratchbar, Crawford et al 1.

Reno County—
35-23-7w Nesley, Fleeger and Mid-Kansas Oil 1.
24-24-8w Smith, Hartman & Skaer 1.

Russell County—
17-12-15w Oswald-Valerius, Valerius O. & G. 19.

Smith County—
18-5-15w Smith, Gardener 1.

Wells Drilling and Shut Down

(Shut down wells indicated by *)

Barber County—
14-30-12w Kumburg, R. D. Rood et al 1.
27-30-14w Pickens, Rowland et al 1*.
30-30-14w Richardson, Skelly Oil et al 1.
35-32-14w Ott, Miller & Vickers 1.
14-34-11w Martin, B. B. Brown et al 1*.

Barton County—
17-19-11w Smith, Huffine et al 1.
12-20-13w Ward, Wiley & Everette 1.

Cloud County—
6-6-4w Murdock, Concordia O. & P. Co. 1*.

Dickinson County—
23-13-3e Jones, Leeward Pet. 1*.

Edwards County—
7-23-19w Noberwell, Edwards County Pet. 1*.

Ellsworth County—
6-14-9w Kasper, John Herron et al 1*.
3-16-8w Herman, Wrightsman 1.

Franklin County—
19-15-18e Barnhill, Howard et al 1.
17-16-18e Owens, Smith, Thrice & Fisher 1*.

Geary County—
18-11-5e Stinford, Kirby & Wright 1*.
9-12-6e Wroight, Liberty Texas Oil 1*.
30-13-6e Foster, Liberty Texas Oil 1*.

Graham County—
23-8-24w Taxon, Keys Bros. & Marine 1.
27-8-25w St. John, Gulf Coast Drlg. Co. 1*.

Harper County—
28-31-9w Muir, Wakefield et al 1*.
19-32-5w Burk, Berry Pet. 1.

Harvey County—
27-22-2e Symons, Watchorn O. & G. 1.
10-23-3e Freeson, Liggett et al 1.

Hodgeman County—
19-21-22w Frizzell, Spencer & Marconnett 1.

Jefferson County—
13-9-19e Edwards, Northern Counties 1*.

Labette County—
26-23-17e Wilks, Ark River Gas 1*.
1-32-20 Thurman, Noble O. & G. 1*.
33-32-20 Bunres, W. C. Willy 1*.
1-33-17 Hornbeck, Cowell et al 1*.
5-35-20 Lipps, Wantland et al 1*.

Lane County—
11-18-27w Dickinson, Richards Refg. Co. 1.

Lincoln County—
35-10-10w Brown, Red Bank Oil 1.
19-11- 6w Stone, Scott & Collins 1*.
22-11- 6w Lewis, Pope & Powell 1*.
36-13-7 w Paul, United Ref. Co. 1*.

Logan County—
14-14-33w Moffett, Coon et al 1*.

McPherson County—
3-18-2w Anderson, Fowler et al 1.
29-18-2w Anderson, Waugh et al 1.

Marion County—
12-20-4e Bixler, Hay & Wells 1.
33-20-5e Wiley, Stewart, Geer et al 1.
32-21-4e Equity, Morgan et al 1*.
1-22-3e Colbeck, Cameron Bros. 1*.

Mitchell County—
10-7-10w Kyle, Marland Oil 1.

Morris County—
18-16-5e Rogers, Derby Oil 1.
21-17-7e Welcher, Bowmand & Jones 1.
24-17-9e Cessman, Rock Creek Oil 1*.

Nemaha County—
19-3-11e Myers, Nemaha O. & G. 1*.

Osborne County—
10- 7-12w Turner, Beasley 1*.
9-10-14w Beasley, Knight et al 1*.

Osage County—
3-15-15e Lease, Barber et al 1*.
27-15-16e Baley, West et al 1*.
3-17-17e Blank, Hazlett, Davis et al 1.
8-17-17e Neil, Mull-Vit. Dev. Co. 1*.

Phillips County—
15-5-16w McQueen, Curtis & Frost 1.
13-5-18w McKinley, Phillips Pet. & Prairie 1.

Pottawatomie County—
11-10-12e St. Mary, Crawford et al 1*.

Reno County—
10-23-4w Magnuson, Sheldon et al 1.
36-24-7w Pexroad, Miss. Valley Oil 1.
9-25-7w High, Cassoday Oil 1.
5-26-4w Williams, Travis et al 1*.
30-26-6w Demoret, Tatlock et al 1.
7-26-7w Stevens, Hopper et al 1.

Riley County—
26-10-6e Marks, Pawnee O. & G. 1.
20-10-7w Thierer, Youker & Douglas 1*.

Rooks County—
7-8-20w Saindon, Keys Pet. 1.

Rush County—
10-18-16w Moore, Morgan & Downing 1*.

Russell County—
13-11-13w Pospishal, Krueger et al 1.
32-11-15w Booth, Snowden & McSweeney 3
17-12-15w Munsell, Valerius O. & G. 2.
17-12-15w Oswald-Valerius, Valerius O. & G. 17.
30-12-15w Austin, Midwest Refg. Co. 1.
6-15-12w Linsay, Kittle & Shoemaker 1.

Saline County—
29-14-2w Davis, L. S. Johnson et al 1*.
26-15-2w Shallion, Brown & Woodward 1*.
15-15-4w Holquest, Thrall et al 1*.

Sedgwick County—
6-25-1e Poff, Boyle, Tack & Preston 1*.
9-25-2e Harrison, Smith & Keller 1*.
34-26-1e Jaden, Wichita O. & G. 1*.
7-26-2e Mills, Lamson et al 1.
7-27-1e Custer, Chastain & Chastain 1.
17-29-1e Howell, Carr, Hartman & Skaer 1.
2-29-2e Fleming, Higgins 1*.

Safford County—
24-22-11w Richardson, Randall & Johnson 1*.

Wabaunsee County—
15-13-12e Henderson, Williams et al 1*.

Wallace County—
12-13-39w Wufkuler, J. Allen Harvey 1*.

Wilson County—
22-28-13e Thompson, Price et al 1*.
29-30-17e Smalley, West & Williams 1*.

Rigs, 14; wells drilling, 87; total, 101.

NORTH CENTRAL TEXAS

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Hutchinson	49	26,730	1	2
Carson	5	552	1	0
Gray	3	4,270	0	0
Wheeler	3	620	1	0
Wichita	50	482	22	0
Wilbarger	48	4,686	8	0
Baylor	3	10	2	0
Hall	1	0	1	0
Archer	115	2,614	54	0
Montague	21	1,462	2	0
Jack	7	0	7	0
Cooke	1	0	1	0
Young	63	1,805	33	0
Throckmorton	2	0	2	0
Shackelford	23	9,347	8	0
Stephens	20	915	6	3
Palo Pinto	7	0	5	2
Eastland	10	125	6	2
Callahan	12	850	8	0
Mitchell	3	162	0	0
Howard	1	40	0	0
Ward	1	0	1	0
Loving	1	0	1	0
Coleman	11	387	5	2
Brown	74	3,308	30	0
Reagan	10	2,445	3	0
Upton	7	243	3	0
Crockett	5	859	0	0
Pecos	1	0	1	0
Val Verde	2	0	2	0
Clay	4	40	2	0
Total June	563	61,951	216	11
Total May	630	65,527	272	9
Difference	67	3,616	56	2

The decrease of 67 in the number of completions during June is entirely accounted for by the fact that only four weeks were included in this report, whereas five weeks were included in the May totals.

Summary of Wells Drilling

County—	Rigs	Drg.	S.D.	Ttl.
Wichita	4	37	14	55
Wilbarger	21	71	21	113
Archer	8	45	8	61
Young	7	29	10	46
Stephens	6	31	16	53
Eastland	12	25	4	41
Brown	15	81	21	117
Coleman	5	31	10	46
Callahan	3	23	3	29
Mitchell	2	13	1	16
Shackelford	11	45	7	63
Montague	10	24	1	35
Throckmorton	1	15	4	20
Upton	7	20	3	30
Crane	2	7	2	11
Crockett	2	18	1	21
Reagan	0	28	2	30
Hutchinson	146	199	24	369
Carson	18	3	1	22
Gray	15	10	8	33
Miscellaneous Panhandle	14	91	59	164
Other miscellaneous				
Total June	314	868	223	1,405
Total May	265	725	204	1,194
Difference	49	143	19	211

COMPLETIONS

HUTCHINSON COUNTY

Kingsland, Gates Oil 4, 60 60
Johnson Bros., A. D. Morton 1 700
Kingsland, New Domain Oil 1 30
J. A. Whittenburg, Phillips Pet. Co. 2.. 360
H. E. Smith et al, Roxana Pet. 2 1500
H. E. Smith et al, Roxana Pet. 3 2740
E. Cooper, The Texas Co. 1 ..... dry
W. L. Kingsland, Canadian River Oil 4 30
H. E. Smith et al, Cockrell-McIlroy 1..1600
H. E. Smith et al, Dixon Creek Oil 18.. 200
Weatherly, Drysdale Oil 1 15
Weatherly, Fly-Blackburn Oil 1 1200
E. Cockrell, Heywood et al 1 125
W. L. Kingsland, J. K. Hughes Dev. 5-A 70
Johnson Bros., J. H. Lenix 1 25
H. E. Smith et al, Relief Oil 1 1600
Johnson Bros., Skelly Oil 1 200
J. A. Whittenburg, Summit Oil 1 520
J. A. Whittenburg, Summit Oil 2 ... 150
W. L. Kingsland, Travelers Oil 2 1000
J. A. Whittenburg, Westex Oil 3 ...1750
W. L. Kingsland, J. K. Hughes Dev. 2-A 800
J. A. Whittenburg, Phillips Pet.-Coble Oil 2 2000
Smith-Capers, Phillips Pet.-Chaski Oil 1 300
J. A. Whittenburg, Skelly Oil 3 ..... gas
H. E. Smith et al, Dixon Creek Oil 14.. 500
W. L. Kingsland, Gates Oil 3 75
W. L. Kingsland, Gibson Oil-McMillen 1 100
Johnson Bros.-Barnum, Phillips Pet. 1 300
Lee Bivens, Roxana Pet. 1 ..... gas
H. E. Smith et al, Roxana Pet. 2-B ... 265
H. E. Smith et al, J. L. Smith 1. 70
C. L. Dial et al, Gulf Prod. 9 35
J. A. Whittenburg-B, Gulf Prod. 1... 75
Johnson Bros., Derby Oil 1 1100
H. E. Smith et al, Dixon Creek Oil 8... 150
H. E. Smith et al, Dixon Creek Oil 21.. 600
H. E. Smith et al, Dixon Creek Oil 29.. 550
E. Cockrell, Double Five Oil 1..... 300
H. E. Smith et al, McIlroy & Herring 2 150
H. E. Smith et al, McMan Oil & Gas 1.. 400
H. E. Smith et al, McMan Oil & Gas 2.. 400
H. E. Smith et al, McMan Oil & Gas 4 1600
H. E. Smith et al, Midwest Exploration Co. et al 1 150
Johnson Bros.-Finklea, Phillips Pet. 1.. 685
J. A. Whittenburg, Phillips Pet.-Coble Oil 3 400
H. E. Smith et al, Riley & Holmes 1...1500
Johnson Bros.-A. Skelly Oil 1..... 50
Smith, Apex Oil Co. 1 300

Wells completed 49
Production 27,030
Gas 2
Gas production 79,000,000
Dry 1

WHEELER COUNTY

G. W. Porter, Midwest Exploration 2.. dry
Jackson-A, Continental Oil 1..... 120
H. C. Phillips, Gibson Oil 3..... 500

Wells completed 3
Production 620
Dry 1

CARSON COUNTY

S. B. Burnett, Gates Oil 2, ...temp. abd
S. B. Burnett, Gulf Prod. 10 152
M. C. Burnett, The Texas Co. 4 85
S. B. Burnett-B, Marland Oil 1 15
Burnett Estate, Marland Oil 5 300

Wells completed 5
Production 552
Dry 1

GRAY COUNTY

Worley & Reynolds, Wilcox-Pampa Oil 3 3500
Worley & Combs, Wilcox-Pampa Oil 2 70
Merten Bros., Clark & Baldridge 1.... 700

Wells completed 3
Production 4270

WICHITA COUNTY

J. E. Roller, Humble Oil & Refg. 1... 6
J. E. Roller, Humble Oil & Refg. 2... dry
L. O. Saunders Est., Humble O. & R. 1.. 20
O. C. Beach, Magnolia Pet. 14 8
Burnett, Dale et al 11 ..... dry
Saunders, Hazlett-Simmons 1 ..... dry
Edgerly, Geo. Pace 1 12
J. A. Fisher, Petroleum Invst. 10 8
J. A. Fisher, Petroleum Invst. 18 15
Bryan, Texahoma O. & R. Co. & Pace 1 dry
Jennings-B, Apple & Brandeberry, 6.... 7
G. Jennings, Bullington-Lee & Pendleton 1 76
Waggoner Bros., Culbertson Co. 38.... 20
Waggoner Bros., Culbertson Co. 39 15
Burnett-E., Humble O. & R. Co. 4.... dry
J. A. Fisher, Simmons Oil Corp. 1-A.. dry
Waggoner Bros., Texahoma O. & R. 18 4
Waggoner-D, Gulf Production Co. 5... dry
J. E. Roller, Humble Oil & Refg. 3 ... 5
J. E. Roller, Humble Oil & Refg. 4... dry
W. H. Chilson, E. J. Stump & Co. 1 .. dry
Snow, F. Beaudoin, 1-A ..... dry
Kemp & Kempner, Block 41 Oil Co. 9.. 6
Waggoner Bros., The Culbertson Co., 40 jnk
G. Jennings, Dale Oil Corp. 24..... 20
T. L. Burnett, The Electra Prod. Co. Inc. 4 2
Pierce Oil Corp., Empire Gas & Fuel 18 8½
G. Jennings, Gulf Prod. 17-A 60
Jenings, L. P. Hammond 4 ..... dry
Burnett, Joe Howell 6 ..... dry
Hines, Humble Oil & Refg. 5 20
Mitchell-Waggoner, Humble O. & R. 5.. dry
Pratt-A, Magnolia Pet. 17 3
B Ramming, Magnolia Pet. 1 40
A Ramming, Magnolia Pet. 20 ..... dry
Cullums-Watkins, Magnolia Pet. 7 .... dry
Cullums-Watkins, Magnolia Pet. 8.... 21
Rio Bravo Oil Co., John O'Neil 24 ... dry
G. Jennings, Panhandle Refg. & McClure 4 1
J. A. Fisher, Petroleum Invst. 19 10
Allen & Kemp-D, Petroleum Prod Co. 2 25
Douglas, Petroleum Prod. Co. 4 ..... dry
McClure, Rubsam & Hunter 1 25
McCarty-A, Shappell Oil 8 ..... dry
Sheldon, Sheldon 1 ..... dry
Chilson, Block 21, E. J. Stump & Co. 1 dry
B Ramming, Skelly Oil Co. 4 7
B Ramming, Skelly Oil Co. 5 18

Wells completed 50
Production 382
Dry 22

WILBARGER COUNTY

Stephens, Empire Gas & Fuel 12 25
Stephens, Humble Oil & Refg. 45 30
W. T. Waggoner-B, Milham Corpn. 3.... 8
Waggoner, Sec. 47, Miller Oil 1 ..... dry
W. T. Waggoner-A, Phillips Pet. 9 240
W. T. Waggoner-A, Phillips Pet. 11 ... 200
W. T. Waggoner-T, Phillips Pet. 1 72
W. T. Waggoner-NN, Phillips Pet. 60
C. L. Castleberry, Powers et al 1, spudded 30 ft. ..... abd
W. T. Waggoner-B, Shamrock Oil 1.. dry
W. T. Waggoner, Texahoma Oil & Refg. Co. & Farnell & Cline 1 ..... dry
W. T. Waggoner, Lease 3, Tidal Oil 1.. 96
Sigler-Waggoner, Atlantic Oil Prod. 4.. 24
W. T. Waggoner-H, Humble O. & R. 11 15
W. T. Waggoner-K, Humble O. & R. 5 54
Sumner, Magnolia Pet. 53 10
W. T. Waggoner-L, Milham Corpn. 14.. 300
W. T. Waggoner-A, Phillips Pet. 9.... 260
W. T. Waggoner-A, Phillips Pet. 12... 120
W. T. Waggoner-G, Phillips Pet. 9 80
W. T. Waggoner-QQ, Phillips Pet. 4 ... 280
C. L. Castleberry, J. F. Shipley 1..... 5
W. T. Waggoner-A, Waggoner Refg. 2 .. 295
W. T. Waggoner, Section 48, Winnipeg Oil 1 ..... dry
Stephens-A, Barkley & Meadows 12 55
Stephens, Empire Gas & Fuel 10 ..... dry
Stephens, Empire Gas & Fuel 40 ... 8½
Stephens, Humble Oil & Refg. Co. 48.. jnk
W. T. Waggoner-G, Humble O. & R. 6 dry
W. T. Waggoner-K, Humble O. & R. 4 8
W. T. Waggoner-N, Humble O. & R. 2 100
W. T. Waggoner-M, Humble O. & R. 8 100
W. T Waggoner-O, Humble O. & R. 6 220
W. T. Waggoner-O, Humble O. & R. 7 200
W. T. Waggoner, Lawson 15 10
W. T. Waggoner-L, Milham Corp. 7 ... 246
W. T. Waggoner, Miller Oil Co. 3 ... 50
W. T. Waggoner-A, Phillips Pet. 8 ... 170
W. T. Waggoner-A, Phillips Pet. 10 ... 180
W. T. Waggoner-G, Phillips Pet. 8 25
W. T. Waggoner-H, Phillips Pet. 5 ... 15
W. T. Waggoner-Q, Phillips Pet. 3 ... 680
W. T. Waggoner-JJ, Phillips Pet. 1 ... 25
W. T. Waggoner-JJ, Phillips Pet. 2 ... 18
W. T. Waggoner-QQ, Phillips Pet. 5 .. 254
W. T. Waggoner-QQ, Phillips Pet. 6 .. 50
W. T. Waggoner-A, Prairie O. & G. 3 25
Guggisberg, The Texas Co. 1 ..... dry
Ramming, Skelly Oil Co. 13 20

Wells completed 45
Production 502
Dry ..... dry

BAYLOR COUNTY

Stevens-A, T. L. Head et al 1 ..... dry
Portwood-C, Murchison & Fain 1 .... dry
Portwood, Magnolia Pet. 7 10

Wells completed 3
Production 10
Dry 2

HALL COUNTY

T. R. Fuston, Hudspeth & Taylor 1 . dry

Wells completed 1
Dry 1

ARCHER COUNTY

Demger, Texhoma Oil & Refg. Co. 1 .. dry
B. G. Hasson, Allday Oil 1 ..... dry
A. P. Jackson, L. T. Burns 6 30
A. P. Jackson, L. T. Burns 7 ..... dry
Wilson-McCrory, trustee, L. T. Burns 1 dry
A. P. Jackson, J. A. Gardner et al 1 .. dry
A. P. Jackson, Humble Oil & Refg. 1 .. dry
A. P. Nichols,-Humble Oil & Refg. 3 .. dry
Wilson-B, McCarty Oil 27 45
A. D. Britton, Pandem Oil 1 ..... dry
Wilson-A, Shappell Oil Co. No. 2, 4 ... dry
Wilson-B, Shaw et al 5 6
Hamilton, Bridwell & Heydrick 2 .... dry
Rachuig-A, Atlantic et al 6 20
Andrews, Homer Donohue 2 ..... dry
Herron, Golding & Cochran 1 ..... dry
Wilhelm, Hines et al 1 ..... dry
Hamilton, Humble Oil & Refg. 10 10
Meade Est., Maer & Staniforth 1 ... 77
Little, Magnolia Pet. 2 114
Abercrombie, Roxana Pet. 1 ..... dry
Meade Estate-B, Shasta Oil Co. et al 1 dry
Richardson, The Texas Co. 12 ..... dry
Abercrombie & Taylor, Texahoma Oil & Refg. 7 44
L. J. Kunkel, Texhoma Oil & Refg. 3 80
S. E. Oldham, Texhoma & Republic 4.. 25
Prideaux, United Producers 1 15
Stehlik, Arco Oil 2 ..... dry
L. F. Wilson, Barkley & Meadows 26.. 60
Murrah, Grace Oil 1 ..... dry
Edwards, C. L. Granberry 1 ..... dry
L. F. Wilson, Humble Oil & Refg. 8.. 6
L. F. Wilson, McCarty Oil 20 60
L. F. Wilson-B, McCarty Oil 28 12
W. L. Andrews, Staley & Wynne & Drechel 1 ..... dry
C. L. Mangold, Shasta Oil 13 10
A. D. Thompson, Tidal Oil 1 25
L. L. Marcell, White Eagle Oil & Refg. 3 13
Meade Estate, Dale Oil Corpn. 1 ..... dry
Rogers, Fisher & Gilliland 10 ..... dry
Herron, Cochran & Golding 1 ..... dry
Young et al, Murchison & Fain 1 ..... dry
Thomas, Pandem Oil Corp. 1 35
L. J. Kunkel, Petroleum Prod. Co. 2 .. 46
Prideaux, Plains Production Co. 1 .. 22
Prideaux, Block 23, Shaw & Rathke 2 15
Jeske, The Texas Co. 8 ..... dry
Hemmering, Texas-Consolidated 1 ..... dry
Longley Est., Texas-Fidelity Oil Corp. 1 dry
Darilek, Trio Prod. Co. 1 ..... dry
A. P. Jackson, L. T. Burns 8 ..... dry
A. D. Thompson, E. E. Clair & Camp Oil & Gas 2 ..... dry
May Rutty-B, Magnolia Pet 5 21
School Land, McCarty Oil 1 80
L. F. Wilson-B, McCarty Oil 29 15
Lester, J. S. Barbee 1 ..... dry
Rogers-A, Continental Oil 6 50
McCarty, Flowers & Winters 1 ..... dry
Anderson, Hines et al 1 ..... dry
Meade Est., Maer & Staniforth 2 ... 44
Lauster, Magnolia Pet. 2 ..... dry
Richardson-A, Murchison & Fain 2 ... dry
Wilhelm, E. A. Reilly 1 ..... dry
Cowan Est.-A, Smith Oil 4 6
Prideaux, The Texas Co. 4 4
A. P. Jackson, Gulf Prod. 11 5
L. W. McCrory, Tr.-C., Gulf Prod. 8 ... 29
B. R. Jeske, Gulf Prod. 8 82
A. P. Nichols, Gulf Prod 40 47
W. M. Ashworth, Gulf Prod. 2 10
L. M. Hayter, Gulf Prod. 3 ..... dry
B. D. Ikard, Gulf Prod. 1 ..... dry
B. R. Jeske, Gulf Prod. Co. 7 60
A. P. Nichols, Gulf Prod. 37 57
A. P. Nichols, Gulf Prod. 38 ..... dry
Power Banking Co., Gulf Prod. Co. 8 15
Hamilton, Texhoma Oil & Refg. 11 ... 178
Hamilton, Texhoma Oil & Refg. 12 ... 160
L. F. Wilson, Marland Oil Co. & Trahan 1 ..... dry
L. F. Wilson-B, McCarty Oil 30 15
Geo. Parrish, Rayzor & Seaberry 1 .... dry
G. T. Netherton, Richardson Oil Corp. 1 dry
L. F. Wilson-A, Wanderer Oil Co. & Humble 1 ..... dry
Rachuig-A, Atlantic Oil Prod. 7 125
Porter, Camp Oil & Gas Co. 1 ..... dry
Jehlik, Cosden-Consolidated Co. 1 ... dry
A. P. Nichols, Gulf Prod. 39 4
W. M. Ashworth, Gulf Prod. 4 10
I. M. Inmom, Harris & Gose 1 ..... dry
Hamilton, Humble Oil & Refg. 13 30
R. O. Prideaux, Kell & Kruger 2 35
S. Wilson, Jesse Lincoln 1 ..... dry
J. T. Richardson, Litchfield et al 1... dry
Meade Est., Maer & Staniforth 3 ..... dry
Lowe, Magnolia Pet. 22 ..... dry
Lowe, Magnolia Pet. 22 51
Kate Rogers, Magnolia Pet. 16 10
W. H. Thomas, Marland Oil Co. 1 65
W. H. Thomas, Marland Oil Co. 2 ... dry
W. H. Thomas, Marland Oil Co. 3 250
Pandem Fee, Pandem Oil Corp. & Simms Oil 14 65
L. J. Kunkel, Petroleum Prod. 3 ..... dry
Richardson, Prairie Oil & Gas 7 12
Abercrombie & Taylor, Roxana Pet. 2.. 63
Meade Est.-A, Shasta Oil Co. et al 4... 26
Meade Est.-A, Shasta Oil Co. et al 5 ... 7
B. R. Jeske, The Texas Co., 12 22
Abercrombie & Taylor, Texhoma Oil & Refg. 8 50
L. J. Parkey, Tidal Oil 1 ..... dry
Prideaux, United Producers Oil 2-A.2.. 10
Prideaux, United Producers Oil 10 15
J. D. Stine, Western Oil Corpn. 1.... dry
Parsons, Shasta Oil Co. et al 1 ..... dry

Wells completed 115
Production 2665
Dry 54

MONTAGUE COUNTY

R. Hinds "A," F. H. E. Oil Co. 5..... 110
R. Hinds, Lesh, McCall & Kilcrease 4.. dry
Howard "A," Texhoma O. & R. Co. 9 (40 water) 50
Salmon et al, F. H. E. Oil Co. 2 ..... abd
R. Hinds, Humble O. & R. Co. 4 80
Gist "A," The Texas Co. 7 42
Hinds, Texhoma O. & R. Co. 5 60
Hinds, Texhoma O. & R. Co. 6 82
Hinds, Benton-Woods et al 8 40
Hinds, Humble O. & R. Co. 2 70
Hinds, Humble O. & R. Co. 5 75
J. W. Maddox, Pure Oil Co. 6 8
Gist "A," The Texas Co. 8 132
R. W. Cunningham, Gulf Prod. Co. 6 .. 52
R. W. Cunningham, Gulf Prod. Co. 7.. 70
R. Hinds "B," F. H. E. Oil Co. 3 40
R. W. Cunningham, Gulf Prod. Co. 8... 62
R. Hinds, Humble O. & R. Co. 6 90
Cunningham, The Texas Co. 3 48
J. B. Oldham, The Texas Co. 8 143
J. W. Maddox "B," The Texas Co. 1... 208

Completed 21
Production 1462
Dry 3
Gas 0

JACK COUNTY

Spearman, Richardson & Markley 1 ... dry
Carter, Scott et al 1 ..... dry
Snedeker, Baytex Oil Co. 3 ..... dry
Stewart, Howard Pet. Co. 1 ..... dry
John Allen, Ilseng Prod. Co. 1 ..... dry

XUM

Pickrell, Kerbow and others 1 ..... dry
Gillespie, Winnipeg Oil Co. 1 ..... dry

Completed 7
Production 0
Dry 7
Gas 0

COOKE COUNTY

Hyman, C. C. Lanier 1 ..... dry

YOUNG COUNTY

Rachuig "B," Atlantic O. P. Co. 3... 50
Whitehead, Bridwell & Heydrick 1 ... dry
Rachuig, Chenault & Lea 1 178
Stewart, J. R. Cole, Jr. 20
Benson, Cosden-Consolidated Oil Co. 3.. 43
Cheeves, Eagle Creek Oil Co. 2 ..... dry
Mercer, Humble O. & R. Co. 14 ..... dry
Speer, Newberg & Foster 1 ..... dry
Howard, Pandem Oil Corp. 1 ..... dry
Prideaux Bros., Tarkington et al 1 5
Beardon, Wilson and others 8 ..... dry
Donnell, Atkinson & Sandefer 1 ..... dry
Bailey, Barkley et al 1 ..... dry
E. Rogers, Barkley et al 1 82
Benson, R. I. Carter 10 15
Benson, R. I. Carter 11 35
Benson, Cosden-Consolidated Oil Co. 4.. 35
Benson, Cosden-Consolidated, Oil Co. 5.. 35
Stewart, Lowry et al 1 ..... dry
Snyder, McElreath, Suggett & Phillips Pet. 2 ..... dry
Whitehead, Dois & Saunders 1 ..... dry
Bryan, Simms Oil Co. 1 ..... dry
Dailey, Stafford & Hayes 1 24
Prideaux Bros., Tarkington et al 2 ... dry
Blackman, H. T. Wolf 1 ..... dry
Rachuig "B," Atlantic O. P. Co. 4 ... 430
E. Rogers, Barkley et a 12 70
E. Rogers, Barkley et al 3 125
Beardon, Bridwell & Heydrick 6 80
Beardon, Bridwell & Heydrick 7 .... dry
R. E. Rogers, Bridwell & Heydrick 1.. dry
Street, Bridwell & Mayfield 8 25
Allen & Williams, Bridwell & Mayfield 3 4
Rachuig, Chenault & Lea 2 50
Jack, Reed et al 1 40
Dean, Richardson & Barkley 1 ..... dry
Gilmore, Roberts Oil Co. 1 ..... dry
Deitrich, Sun Oil Co. 2 127
Beardon, The Texas Co. 10 80
Brown, H. T. Wolf 1 ..... dry
Farrow, Wolf et al 1 ..... dry
Costello Bros., Dyer et al 1 ..... dry
Harrison, Hubbard Drilling Co. 1 ..... dry
E. Rogers, Barkley et al 3 80
Gilmore, Biljobul Oil Co. 1 ..... dry
Benson, Burton & Texhoma O. & R. Co. 1 30
Fee, R. Campbell 1 ..... dry
Benson, R. I. Carter 12 65
Benson, Cosden-Consolidated Oil Co. 6.. 8
Benson, Cosden-Consolidated Oil Co. 7.. 9
Stewart, Cosden-Consolidated Oil Co. 1 dry
Prideaux, Douglas et al 1 4
Tucker, Golding & Cochran 1 ..... dry
Whitehead, Hamilton & Martin 1 38
Hall, Jeffers & Jeffers 1 ..... dry
McCaghren, Long et al 2-A ..... dry
Prideaux, Maer & Staniforth 1 (2 bbl. w.) 10
Snyder, Plains Prod. Co. 1 ..... dry
Bryan, Trigg & Lane 1 ..... dry
Calvin, O. K. Pipe Threading Mch. Co. 1 8

Completed 63
Production 1858
Dry 33
Gas 0

THROCKMORTON COUNTY

Upshur County School Lands, Bridwell & Heydrick & Humble O. & R. Co. 1 dry
Ledbetter, Humble O. & R. Co. 1 .... dry

Completions 2
Production 0
Dry 2
Gas 0

SHACKELFORD COUNTY

Cook, Humble O. & R. Co. 2 800
Flippen, Humble O. & R. Co. 1 ..... dry
Casey, Milham Corp. of Texas 2 7
Willie Est., Milham Corp. of Texas 1.. dry
Cook, Roeser & Pendleton & Marland 5-A-85 500
Cook, Roeser & Pendleton & Marland 6-A-84 800
Cook, Roeser & Pendleton & Marland 11-A-85 700
Cook, Roeser & Pendleton & Marland 12-A-85 500
Cook, Roeser & Pendleton & Marland 2-A-85 400
Cook, Roeser & Pendleton 2-B-85 1700
Cook, Roeser & Pendleton 3-B-85 600
Cook, Roeser & Pendleton 7-B-85 800
Cook, Roeser & Pendleton 8-B185 700
Cook, Roeser & Pendleton 5-B-85 ... dry
Cook, Roeser & Pendleton 1-B-85 800
Cook, Roeser & Pendleton & Marland 6-A-84 1000
Simpson, Texas Unity Oil Co. 1 ..... dry
Dodson, White Bros. 1 ..... dry
Cook, Amerada Pet. Corp. 1 (4 m. gas) 10
Ledbetter, McCurdy et al 1 ..... dry
Parrish, Conley et al 1 ..... dry
Newell, Hyde & James 1 ..... dry
Lynch, Phillips Pet. Co. 9 (100 bbl w.) 30

Completions 23
Production 9347
Dry 8
Gas 0

STEPHENS COUNTY

Satterwhite, Gulf Prod. Co. 3 45
J. M. Ward "D," Gulf Prod. Co. 3 ... 48
Sikes, Lauderdale & Ennis 1 ..... dry
Tolle et al, Reeves & Meredith 1 ..... dry
Thorp, Robert Oil Corp. 1 ..... dry
G. W. Hill, Acct. 2, Mid-Kansas Oil & Gas Co. 4 40
Morrison, Mid-Tex Oil Co. 3 40
Echols "B," Swensondale Oil Co. 1 5
Nolan, Provident Oil Co. 1 ..... dry
Smith, Humble Oil & Refg. Co. 7 50
Grimes, Gleinfelder 4 25
Akin, Phillips Pet. Co. 2 ..... dry
Binney, Texas Pacific C. & O. Co. 65 ... 75
Hancock, Texas Pacific C. & O. Co. 1 ... 500
Cunningham, Mid-Tex Oil Co. 5 12
Akin, Brown & Co. 4 ..... (3 m.) gas
Hodges, Chestnut & Smith Corp. 1 (7 m.) gas
Gandy, Hucony Gas Co. 5 ..... (3 m.) gas
Ming, Scanlon & Lightfoot 1 ..... dry
Beyer "A," Gulf Prod. Co. 2 75

Completions 20
Production 915
Dry 6
Gas 3
Gas production 13,000,000

PALO PINTO COUNTY

Smith, Singleton et al 1 ..... dry
McClure, Whatley et al 1 ..... dry
Wilbar, Heath et al 1 ..... dry
Cardwell, Hart Oil Corp. 2 ..... (⅛ m.) gas
Wilbar, Heath et al 2 ..... dry
Robinson, Moore & Snebold 1 (⅛ m.) gas
Owens, Nelson Oil Synd. 1 ..... abd

Completions 7
Production 0
Dry 5
Gas 2
Gas production 1,250,000

EASTLAND COUNTY

Blackwell, Kirk & Brewer 1 ..... dry
Ross, Moorman et al 1 ..... dry
Hitson, Hoffer Oil Corp. 1 ..... dry
Wright, Eastland Oil Co. 1 100
Tucker, Fort Ring Oil Co. 1 ... (5 m.) gas
Wood, Kokomo Pet. Co. 1 ..... dry
Downtain, Lewis et al 1 ..... (½ m.) gas
Allen Est., Lighfot et al 3 ..... dry
R. Gullett, Roberts Oil Corp. 1 ..... dry
Hodges Est., Teas Pacific C. & O. Co. 6 25

Completions 10
Production 125
Dry 6
Gas 2
Gas production 5,500,000

CALLAHAN COUNTY

Terry, Diamond 1 ..... dry
Barr, Wilkerson & Lightfoot 1 ..... dry
McDonough, Prairie O. & G. Co. 8 175
McDonough, Prairie O. & G. Co. 10 250
Cunningham, Prairie O. & G. Co. 1 250
Pippin, Andrews Pet. Corp. 1 ..... dry
Derrington, Canyon O. & G. Co. 3 175
Maddux, French & Lewis 1 ..... dry
Jones, French & Lewis 1 ..... dry
Bell, Holmes et al 1 ..... dry
Robbins, Pennant O. & G. Co. 1-A ..... dry
Gorsuch, Transcontinental Oil Co. 1 ... dry

Completions 12
Production 850
Dry 8
Gas 0

MITCHELL COUNTY

A. P. Watson, Magnolia Pet. Co. 1 ... 47
Womack, The California Co. 4 92
Womack, The California Co. 5 23

HOWARD COUNTY

H. R. Clay, Fred Hyer 1 40

WARD COUNTY

Hutchings Stock Assn., Gulf Prod. Co. dry

LOVING COUNTY

Chapman-Wheat, P. V. Pet. Co. 1 ..... abd

COLEMAN COUNTY

Dibrell "A," Midwest Exp. Co. 2 125
Neeb, Pennant O. & G. Co. 1 ..... dry
Garrett et al, DeArman Bros. 1 ..... dry
Dibrell, Burke-Greis Oil Co. 2 150
Dibrell "B," Midwest Exp. Co. 1 (12 m.) gas
Stearns, Howard Pet. Co. 1 ..... dry
Dibrell, Burke-Greis Oil Co. 3 100
Davenport, Canyon O. & G. Co. 1 ..... dry
Morris, Magnolia Pet. Co. 16 ...(3 m.) gas
Dibrell, C. O. Moore 1 ..... dry
Dibrell, Western Oil Sales Corp. 1-A... 12

Completions 11
Production 387
Dry 5
Gas 2
Gas production 15,000,000

BROWN COUNTY

Dunn, Anderson & Schultz 1 ..... dry
Allen, Barkley & Conway 1 ..... dry
Gaines, Brown & Co. 1 10
Chambers, Conway Bros. 7 15
Westerman, J. S. Cosden, Inc. 10 10
Williams, "A," J. S. Cosden, Inc. 8 ... 50
Pickett, Curry & Moore 1 35
Henson, R. G. Gillespie Est. 2 ..... dry
Arledge, J. K. Hughes Dev. Co. 7 ..... dry
Arledge, J. K. Hughes Dev. Co. 9 75
Arledge, J. K. Hughes Dev. Co. 10 ... 200
Keller, J. K. Hughes Dev. Co. 1 40
Dunn, Humble O. & R. Co. 7 10
Kilgore "B," Humble O. & R. Co. 1 60
Stover, Humble O. & R. Co. 3 15
Eddington, Inglewright et al 3 175
Allen, R. C. McCarter et al 7 40
Suttles, Midwest Exp. Co. 2 25
Gaines, Prairie O. & G. Co. 15 5
J. Wooldridge, J. L. Thompson 1 ..... dry
Dunn, Barkley & Conway 11 40
Graham Est., Douglas et al 1 ..... dry
Williams, Gholson 1 10
Thompson, Gilman & McMurray 5 80
Arledge, J. K. Hughes Dev. Co. 11 .... dry
W. W. Allen, Humble O. & R. Co. 1 ... dry
Hodnett, Humble O. & R. Co. 3 30
E. P. & W. H. Kilgore "B," Humble O & R. Co. 1 400
Leatherwood, McCarter et al 2 30
Suttles, Midwest Exp. Co. 3 100
Gaines, O'Brien & Quinn 1 ..... dry
Dunn, Phillips Pet. Co. 1 75
Prater, Phillips Pet. Co. 2 60
Suttles, Root 3 40
Starr, T. B. Slick 3 ..... dry
Dunn, The Texas Co. 13 75
Dunn, The Texas Co. 14 20
Newton, West & H-Y Oil Co. 4 ..... dry
Newton, Williamson et al 3 60
Davis, Jamellen Oil Co. 1 ..... dry
Newton, Barbour Oil Co. 2 ..... dry
Byrd, Blair & Kell 5 ..... dry
Gaines, J. S. Cosden 2 ..... dry
McDonough, Haggard 2 ..... dry
Gaines, Jake Hamon, Jr. 1 25
J. C. Kilgore "A," Humble O. & R. 2.. 25
J. C. Kilgore "A," Humble O. & R. 3.. 30
Clark, McLester Oil Co. 4 50
Clark, McLester Oil Co. 7 80
Edington, Milham Corp. 2 ..... dry
Dunn, Phillips Pet. Co. 3 60
Chambers, Prairie O. & G. Co. 8.... 15
W. M. Wooldridge, Prairie O. & G. 5.. dry
Prater, Schaffner & Wilson 10 40
DeBusk, T. B. Slick 1 ..... dry
Dunn, Smith Oil Co. 13 60
Conklin, Andrade Oil Co. 1 ..... dry
Beal, C. O. Moore 1 ..... dry
Parks, Richardson et al 2 ..... dry
Eddington, Arkansas Fuel Co. 1 ..... dry
Allen, Barkley & Conway 2 160
Byrd, Blair & Kell 6 ..... dry
Williams, J. S. Cosden, Inc. 3 100
Hughes, Humble O. & R. Co. 1 ..... dry
Leatherwood, Humble O. & R. Co. 3 .. 3
Wooldridge, McLester Oil Co. 3 600
County Poor Farm, Meridian Pet. Corp. 1 dry
Nations, Mimms et al 1 ..... dry
Ramsey, C. O. Moore 1 ..... dry
Westerman, Pandem Oil Corp. 2 170
Suttles, Root 2 30
Dun, The Texas Co. 15 75
Reed, Haynes 1 ..... dry
Terveoren, Mitcham 1 ..... dry

Completions 74
Production 3308
Dry 20
Gas 0

REAGAN COUNTY

University, Big Lake Oil Co. 64 953
University (Gp. 1), Texon O. & L. Co. 41 350
Universiay (Gp. 1), Texon O. & L. Co. 43 344
University (Gp. 1), Texon O. & L. Co. 2-A 250
University (Gp. 1), Texon O. & L. Co. 44 245
University (Gp. 1), Texon O. & L. Co. 45 164
University, Big Lake Oil Co. 2-B 149
University, Big Lake Oil Co. 20-A .... dry
University, Big Lake Oil Co. 25-A .... dry
J. A. Talley, F. P. Zoch & Marland Oil Co. 1 ..... dry

Completions 10
Production 2445
Dry 3
Gas 0

UPTON COUNTY

Burleson, Dixie Oil Co. 2 3
Burleson, Dixie Oil Co. 3 175
E. S. Hughes, Dixie Oil Co. 1 44
Noelke & Murphy, Marland Oil Co. and Choate & Henshaw 1 ..... dry
Halff, Hults et al 1 ..... dry
Baker, Republic Prod. Co. 2 20
Union Land Co., Tidal Oil Co. 1 ..... dry

Completions 7
Production 242
Dry 3
Gas 0

CROCKETT COUNTY

Powell, Cromwell et al 3 160
Powell, Humble O. & R. Co. 4 (56 bbl w.) 119
Powell "A," J. K. Hughes Dev. Co. 1.. 250
Powell (Tr. B), Gulf Prod. Co. 2-A ... 60
Powell, Gulf Prod. Co. 3-A 270

Completions 5
Production 859
Dry 0
Gas 0

PECOS COUNTY

Devlin, Levi Smith 1 ..... dry

VAL VERDE COUNTY

Moore Est., Joe W. Morris 1 ..... dry
Moore Est., E. T. Williams 1 ..... dry

CLAY COUNTY

Culbertson, Lowry Oil Corp. 2 50
Stine Est., Cumley & Stine 2 10
Warren Est., Cowboy Oil Co. 1 ..... dry
Waggoner, Winnipeg Oil Co. 2 ..... dry

Completions 4
Production 40
Dry 2
Gas 0

RIGS AND WELLS DRILLING

HUTCHINSON COUNTY

Rigs

Sec. 2, Blk. B-3, E. Cockrell, Alaska Pet. Co. 1.
Sec. 89, Blk. Z, J. A. Whittenburg, Amerada Pet. Corp. 4.
Sec. 19, Blk. Y, Weatherly, American Ref. Co. 1, 2, 3.
Sec. 1, Blk. J, Wm. Yake, Anderson & Pritchard 1.
Sec. 13, Blk. Y, J. A. Whittenburg, Brookins & Kistler 1.
Sec. 14, Blk. Y, Smith, Buffalo Oil Co. 1.
Sec. 35, Blk. 47, Wm. Lake, Clark & Hagy 1.
Sec. 14, Blk. Y, Smith, Cockrell & McIlroy 3, 4.
Sec. 14, Blk. Y, Smith, Currie Bros. & Phillips 2, 3.
Sec. 20, Blk. Y, Johnson Bros., Delmar Oil Co. 2, 3, 4.
M. Whitley, Tr. 4, Johnson, Devonian Oil Co. 5.
Sec. 66, Blk. 46, Johnson Bros. "A," Devonian Oil Co. 1.
Sec. 14, Blk. Y, Smith, Dixon Creek Oil Co. 19, 20, 35.
Sec. 11, Blk. Y, Smith, Echo Oil Co. 4.
Sec. 19, Blk. Y, J. F. Weatherly, Empire Gas & Fuel Co. 2, 5.
Sur. No. 31-A, W. S. Christian, Gulf Prod. Co. 1.
Sec. 1, Blk. 1, C. L. Dial et al, Gulf Prod. Co. 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25.
Sec. 2, Blk X03, J. M. Sanford, Gulf Prod. Co. 1.
Sec. 66, Blk. 46, E. B. Johnson, Gulf Prod Co. 4, 5, 6, 8, 9, 10, 11, 12.
M. Whitley, J. A. Whittenburg, Gulf Prod Co. 4.
Sec. 89, Blk. Z, J. A. Whittenburg "B." Gulf Prod. Co. 2, 3.
Sec. 65, Blk. 46, J. A. Whittenburg "E." Gulf Prod. Co. 3, 4, 5.
Sec. 3, Blk. Y, E. Cockrell, Gulf Prod. Co. 2, 3, 4.
J. Rodriguez, W. F. Allen, Get Oil Corp. 1.
Sec. 4, Blk. Y, Kinksland, Gibson Oil Corp. 8.
Sec. 6, Blk. B-4, Kingsland, Gibson Oil Corp. & McMillan 2.
Sec. 27, Blk. 47, J. A. Whittenburg, Goldeline Oil Co. (was Buttram Pet Co.) 1.
Sec. 89, Blk. Z, J. A. Whittenburg "A", Goldeline Oil Corp. 1.
J. A. Whittenburg "B," Goldeline Oil Corp. 1.
Sec. 66, Blk. 46, Johnson, L. R. Hagy 1.
Sec. 31, Blk. Y, W. S. Christian, W. Scott Heywood 2, 3, 4.
Sec. 6, Blk. Y, Kingsland, J. K. Hughes Dev. Co. 8-A, 16-A.
Sec. 6, Blk. B-4, Kingsland, J. K. Hughes Dev. Co. 2-B.
Sec. 11, Blk. Y, Smith, Lucky 10 Oil Co. 3, 4.
River Bed, State Land, Marland Oil Co. 1.
Sec. 20, Blk. Y, Johnson Bros. "A." Marland Oil Co. 4.
Sec. 1, Blk. X20, Perkins-Dial, Marland Oil Co. 1, 2, 3, 4, 5, 6, 7, 8.
Sec. 19, Blk. Y, J. F. Weatherly "A," Marland Oil Co. 2, 3, 4.
Sec. 19, Blk. Y, J. F. Weatherly "B," Marland Oil Co. 3, 4.
Sec. 19, Blk. Y, J. F. Weatherly "C." Marland Oil Co. 1, 2, 3.
Sec. 65, Blk. 46, J. A. Whittenburg, Marland Oil Co. 5.
M. Whitley No. 1, J. A. Whittenburg "A," Marland Oil Co. 7.
Sec. 9, Blk. M15, E. B. Jones, Matheson & Dunn 1.
Sec. 14, Blk. Y, Smith, S. D. McIlroy 1, 2.
Sec. 14, Blk. Y, Smith, S. D. & W. W. McIlroy 4.
Sec. 5, Blk. Y, Smith, McMan O. & G. Co. 6.
Sec. 65, Blk. 46, Whittington-Archer, McMan O. & G. Co. 1, 3, 4.
M. Whitley, Tr. 9, Johnson Bros., A. D. Morton 3.
Sec. 5, Blk. Y, W. R. Harvey, Permian Oil Co. (was Madden et al) 1.
Sec. 64, Blk. 46, Johnson-Dorsett, Phillips Pet. Co. 1.
Sec. 21, Blk. Y, Johnson-Gordon, Phillips Pet. Co. 2, 3.
M. Whitley No. 1, Johnson-Graham, Phillips Pet. Co. 1.
M. Whitley No. 1 Whittenburg-Patton, Phillips Pet. Co. 2, 3, 4, 5.
Sec. 13, Blk. Y, Whittenburg, Phillips Pet. and Coble Oil 16, 17, 18.
M. Whitley, Lot 24, Whittenburg, Phillips Pet., Gibson & McMillan 2, 3, 4.
Sec. 4, Blk. B-4, Johnson "A," Prairie O. & G. Co. 2.
Sec. 64, Blk. 46, Johnson "A." Prairie O. & G. Co. 3, 4, 17.
Sec. 20, Blk. Y, Johnson "A," Prairie O. & G. Co. 5, 6.
Sec. 21, Blk. Y, Johnson "A," Prairie O. & G. Co. 15.16.
Sec. 19, Blk. Y, J. F. Weatherly, Prairie O. & G. Co. 7, 8, 9, 10, 11
Sec 70, Blk. 46, Johnson, Pure Oil Co. 2, 3.
Sec. 11, Blk. Y, Smith, Relief Oil Co. 4.
Sec. 11, Blk. Y, Smith, Riley & Holmes 2.
Sec. 43, Blk. 47, J. L. Williams, Sinclair O. & G. Co. 1.
Sec. 20, Blk. Y, Johnson Bros., Skelly Oil Co. 1, 2, 4.
Sec. 3, Blk. Y, E. Cockrell, J. D. Ward 2.
Sec. 34, Blk. 47, Cal Merchant, Wentz Oil Corp. 1.
Sec. A-2, Reimer Land, P. E. Reimer, Wentz Oil Corp. 1.
Sec. 13, Blk. Y, Whittenburg, Westex Oil Co. 7, 8.
E. V. Hedgecoke, E. V. Hedgecoke, White Eagle O. & R. 1.
Sec. 64, Blk. 46, Hagy-Johnson, White Eagle O. & R. Co. 8.

Wells Drilling.

Sec. 13, Blk. Y-2, Bivins-B, Amarillo Oil Co. 4.
Sec. 89, Blk. Z, Whittenburg, Amerada Pet. Corp. 1, 2, 3.
Sec. 2, Blk. B-4, Whittenburg, American Ref. Co. 2.*
Sec. 11, Blk. Y, Smith, Apex Oil Co. 2.
Sec. 10, Blk. M21, E. E. Watkins, Bear Creek Oil Co. 1.*
Sec. 37, Blk. 47, Cal Merchant, Big Creek Oil Co. 1.*
Sec. 12, Blk. Y, Whittenburg, Canyon O. & G. Co. 1, 4, 5.
Sec. 1, B-4, J. E. Pritchard, Center Dome Oil Co. 1, 2.
Sec. 12, Blk. Y, Whittenburg, Coble Oil & Whittenburg 1, 3.
Sec. 14, Blk. Y, Smith et al, Cockrell & McIlroy 2.
Whittenburg, Continental Oil Co. 1.
Sec. 20, Blk. Y, Johnson Bros., Delmar Oil Co. 1.
M. Whitley, Tr. 8, Johnson Bros., Derby Oil Co. 2.
Sec. 20, Blk. Y, Johnson Bros., Derby Oil Co. 1.
M. Whitley, Johnson Bros., Devonian Oil Co. 2, 3, 4.*
Sec. 11, Blk. Y, H. E. Smith, Dixon Creek Oil Co. 3, 4, 5, 6, 7, 9, 10, 11, 12.
Sec. 14, Blk. Y, H. E. Smith, Dixon Creek Oil Co. 13, 14, 15, 16, 17.
Sec. 12, Blk. Y, H. E. Smith, Dixon Creek Oil Co. 27, 28.
Sec. 5, Blk. Y, H. E. Smith, Dixon Creek Oil Co. 33, 34, 36.
Sec. 15, Blk. X02, Whittenburg, Douglas Oil & Cline 1.
Sec. 21, Blk. Y, Johnson Bros., E. J. Dunigan et al 1, 2.
Sec. 11, Blk. Y, H. E. Smith et al, Echo Oil Co. 1, 2, 3.
Sec. 68, Blk. 46, Johnson Bros., Empire Gas & Fuel Co. 1.
Sec. 21, Blk. Y, Johnson Bros. "B," Empire G. & F. Co. 1.
Sec. 19, Blk. Y, J. F. Weatherly, Empire G. & F. Co. 1.
Sec. 6, Wm. Heath, E. M. A. Carver, Lee Flowers & Brookins 1.
Sec. 19, Blk. Y, J. F. Weatherly, Fly-Blackburn Oil Co. 2.
M. Anglin, Christian et al, Gulf Prod. Co. 1.
Sec. 24, Blk. 47, Dial et al, Gulf Prod. Co. 10, 11, 12, 13.
Sec. 2, Blk. X02, Sanford, Gulf Prod. Co. 1-B.
Sec. 5, Blk. M-26, J. T. Hodges, Gulf Prod. Co. 1.
Sec. 66, Blk. 46, E. B. Johnson et al, Gulf Prod. Co. 1, 2, 3, 7.
M. Whitley, J. A. Whittenburg, Gulf Prod. Co. 3, 5, 1-A, 2-A, 3-A, 4-A, 5-A.
Sec. 27, Blk. 47, J. A. Whittenburg, Gulf Prod. Co. "D" 2.
Sec. 65, Blk. 46, J. A. Whittenburg "E", Gulf Prod. Co. 1, 2.
Sec. 4, Blk. V, Fee, Gulf-Panhandle-Cline 1.
Sec. 3, Blk. Y, E. Cockrell, Gulf Prod. Co. 1.
Sec. 74, Blk. 46, Johnson, Gibson Oil Corp. 1.
Sec. 4, Blk. Y, Kingsland, Gibson Oil Corp. 1, 5.
Sec. 18, Blk. M23, McCormick Est., Gibson Oil Corp. & McMillan 1.*
Sec. 82, Blk. 46, J. M. Sanford, Gibson Oil Corp. & McMillan 1.*
Sec. 28, Blk. Y, Johnson Bros., Gibson Oil Corp. & McMillan 1.
Sec. 1-A, Blk. M26, J. T. Hodges, Golding & J. R. Phillips 1.*
Sec. 33, Blk. M21 Harvey, Harvey Oil Co. 1.
Sec. 31, Blk. Y, W. S. Christian, W. Scott Heywood 1.
Sec. 12, Blk. Y, Smith, Holmes, Currie & McKnight 1, 2.*
Sec. 6, Blk. Y, Kingsland, J. K. Hughes Dev. Co. 3-A, 4-A, 6-A, 7-A, 9-A, 10-A, 11-A, 17-A.
Sec. 6, Blk. B-4, Kingsland "B." J. K. Hughes Dev. Co. 1.
Sec. 4, Blk. M18, Earle Thompson, Inspiration Oil Co. 1.
Sec. 11, Blk. Y, Smith, Dan A. Japhet 1, 2.
Sec. 11, Blk. Y, Smith, Lenix & Pattison 2.
Sec. 11, Blk. Y, Smith, Lucky Ten Oil Co. 2.
Sec. 6, Blk. 1, Johnson Bros., Marland Oil Co. 1.
Sec. 35, Blk. M23, Belle Wisdom, Marland Oil Co. 1.

Sec. 20, Blk. Y, Johnson Bros., Marland Oil Co. "A," 1, 2, 3.
Sec. 29, Blk. 47, Martha Reimer, Marland Oil Co. 1.
Sec. 19, Blk. Y, J. F. Weatherly "A," Marland Oil Co. 1.
Sec. 19, Blk. Y, J. F. Weatherly, Marland Oil Co. 1-B, 2-B.
Sec. 65, Blk. 46, Wittenburg, Marland Oil Co. 1, 2, 3, 4.
M. Whitley, Whittenburg "A," Marland Oil Co. 1, 2, 3, 4, 5, 6.
Lot 28, Cap. & Wms., Whittenburg, Shamrock Pet Co. (was McCamey & Shearin) 1, 2.
Sec. 14, Blk. Y, H. E. Smith, S. D. & W. W. McIlroy 1, 2, 3, 7, 8.
Sec. 5, Blk. Y, H. E. Smith, McIlroy & Herring 3, 4, 5.
Sec. 66, Blk. 46, Johnson-Wheatley, McMan O. & G. Co. 1, 2.
Sec. 21, Blk. Y, Johnson-Martin-Gray, McMan O. & G. Co. 1.
Sec. 65, Blk. 46, Whittington-Archer, McMan O. & G. Co. 2.
Sec. 15, Blk. Y, H. E. Smith, J. H. Middleton 1, 2.*
Sec. 70, Blk. 46, Johnson Bros., Midwest Exploration Co. 1.
Sec. 5, Blk. Y, Smith-Capers, Midwest & Holmes 3*, 4, 5.
Sec. 20, Blk. Y, Johnson Bros., Minnehoma Oil Co. & Kistler 1.
W. D. Twitchell, Murchison & Fain 1.
Sec. 4, Blk. Y, W. L. Kingsland, New Domain Oil Co. 2.
Sec. 12, Blk. Y, Smith, J. R. Phillips & Heywood 1, 2.
Sec. 64, Blk. 46, Johnson-Barnum, Phillips Pet. Co. 2 .
Sec. 21, Blk. Y, Johnson-Gordon, Phillips Pet. Co. 1.
M. Whitley, Tr. 5, Johnson-Graham, Phillips Pet. Co. 2, 3.
Sec. 66, Blk. 46, Johnson-Mountford, Phillips Pet. Co. 1.
Sec. 68, Blk. 46, Johnson-Neil, Phillips Pet. Co. 1.
Sec. 72, Blk. 46, Johnson-Stephens, Phillips Pet. Co. 1.
Sec. 5, Blk. Y, Smith, Phillips Pet. Co. 1.
Sec. 12, Blk. Y, J. A. Whittenburg, Phillips Pet. Co. 1* gas, 3, 4.
Lot 21, Cap. & Wms., Haines-Whittenburg, Phillips Pet. Co. 1, 2.
Sec. 12, Blk. Y, Whittenburg-Mary Huff, Phillips Pet. Co. 1, 2, 3, 4.
M. Whitley, Whittenburg-Patton, Phillips Pet. Co. & Gibson Oil Co. 1.
Johnson Bros., Phillips Pet. Co. 2.
Sec. 12, Blk. Y, Whittenburg, Phillips Pet. & Coble Oil 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15.
Sec. 63, Blk. 45, Whittenburg, Phillips Pet. & Gibson O. Corp. 2, 3, 4, 5, 6, 7.
Sec. 13, Blk. Y, Whittenburg, Phillips Pet. & Jerry Oil Co. (was carried Phillips Pet. & Parks Oil) 1, 3, 4, 5.
Sec. 2, Blk. Y, E. Cockrell, Phillips Pet. & Pulaski 1.
M. Whitley, Tr. 7, Johnson Bros., Phillips Pet. & Williams 2.
Sec. 12, Blk. Y, Smith-Capers, Phillips Pet. & Pulaski 2, 3.
Sec. 20, Blk. Y, Johnson "A," Prairie O. & G. Co. 7, 8, 9, 10, 11, 12.
Sec. 21, Blk. Y, Johnson "A," Prairie O. & G. Co. 13, 14.
Sec. 4, Blk. B-4, Johnson "B," Prairie O. & G. 2.*
Sec. 23, Blk. Y, M. Weatherly, Prairie O. & G. Co. 2, 3.
Sec. 3, Blk. 1, Johnson Bros., W. R. Ramsey 1.*
Sec. 11, Blk. Y, H. E. Smith, Relief Oil Co. 2*, 3.
Sec. 86, Blk. 46, Lee Bivins, Roxana Pet. Corp. 1.
Sec. 6, Blk. M26, H. Jasper, Roxana Pet. Corp. 1.
Sec. 14, Blk. Y, Smith, Roxana Pet. Corp. 4.
Sec. 11, Blk. Y, Smith, Roxana Pet. Corp. 1-B, 2-B, 3-B, 4-B, 5-B.
Sec. 4, Blk. B-4, Johnson Bros. "A," Skelly Oil Co. 2.
Sec. 20, Blk. Y, Johnson Bros., Skelly Oil Co. 1*, 3, 4.*
M. Whitley, Whittenburg, Skelly Oil Co. 4, 5.
Sec. 6, Blk. Y, W. L. Kingsland, Skiatex Oil Co. 3, 4.
Sec. 33, Blk. Z, Wm. Lyal, Smith & Willbank 1.*
Sec. 12, Blk. Y, Whittenburg, Smith & Bynum 2.
Sec. 7, Blk. Y, H. E. Smith, J. L. Smith 2.
Sec. 5, Blk. Y, H. E. Smith, Spring Creek Oil Co. 2, 3.
Sec. 14, Blk. Y, Smith, Sunburst Oil Co. 1.
Sec. 7, Blk. M21, H. W. Pitts, Sunny Jim Oil Co. 2.
Sec. 12, Blk. Y, Whittenburg, Sunny Jim Oil Co. 2, 3.
Sec. 8, Blk B-3, E. Cockrell, J. A. Swindler & Son 1.
Sec. 132, Blk 5, S. B. Burnett Est., The Texas Co. 7.
Sec. 1, Blk. Y, Johnson Bros., Tex-O. Oil Co. 1.*
Sec. 5, Blk. Y, H. E. Smith, Triangle Oil Co. 1, 2, 3.
Sec. 3, Blk. Y, E. Cockrell, J. D. Ward 1.
Sec 8, Blk. Y, O. W. Jarvis, Western Oil & Dev. Co. 1.*
Sec. 13, Blk. Y, Whittenburg, Westex Oil Co. 4, 5, 6.
Sec. 64, Blk. 46, Johnson Bros., White Eagle O. & R. Co. 2.
Sec. 64, Blk. 46, Hagy-Johnson, White Eagle O. & R. Co. 1.
Sec. 4, Blk. B-4, Grace-Johnson, White Eagle O. & R. Co. 1.
Sec. 11, Blk. Y, Smith-Capers, White Eagle O. & R. Co. 2, 4.
Sec. 12, Blk. Y, Whittenburg, White Eagle O. & R. Co. 1, 2.

CARSON COUNTY

Rigs

Sec. 127, Blk. 5, S. B. Burnett, Empire Gas & Fuel Co. 1.
Sec. 106, Blk. 5, S. B. Burnett, Gulf Prod. Co. 17
Sec 116, Blk. 5, S. B. Burnett "A," Marland Oil Co. 5.
Sec. 103, Blk. 4, C. R. Garner, Republic Prod. Co. 1.
Sec. 114, Blk. 4, Jordan, Brown et al, J. O. Whittington 1.

Wells Drilling

Sec. 22, Blk. Y-2, E. S. Polling, Amatex Dev. Co. 1.*
Sec. 115, Blk. 5, Burnett Est., American Refg. Co. 6, 7, 8.
Sec. 106, Blk. 5, S. B. Burnett, Gulf Prod. Co. 11, 12, 13, 14, 15, 16.
Sec. 115, Blk. 5, S. B. Burnett, Magnolia Pet. Co. 2*, 3.
Sec. 116, Blk. 5, S. B. Burnett "A," Marland Oil Co. 2, 3, 4.
Sec. 107, Blk. 5, S. B. Burnett, Marland Oil Co. 6, 7.
Sec. 105, Blk. 5, S. B. Burnett "C," Marland Oil Co. 1.
Sec. 128, Blk. 5, S. B. Burnett "D," Marland Oil Co. 1.
Sec. 5, Blk. 5, Deahl, Prairie O. & G. Co. 1.
Sec. 1, Blk. 7, G. W. Whittier, Gibson Oil Corp. (was McFarland & Thomas) 1.*
Sec. 92, Blk. 4, E. F. Ryan, Roxana Pet. Corp. 1.
Sec. 115, Blk. 5, Burnett Est., W. W. Silk et al 6.
Sec. 92, Blk. 5, M. C. Burnett, The Texas Co. 8, 9.
Sec. 65, Blk. 4, J. C. McConnell, Young & Patrick 1.*

MOORE COUNTY

Wells Drilling

Sec. 59, R. B. Masterson "J," Amarillo Oil Co. 1.*
Sec. 19, Blk. 44, Terry Thompson, Amarillo Oil Co. 1.
Sec. 68, Blk. 3, J. T. Sneed, Jr., Cadman Oil et al 1.
Sec. 25, Blk. 1, Sneed, Lee Flowers & Brookins 1.*
N. Jones, Sneed, Phillips Pet. Co. 1.
T & N O 6-T, Sneed, Moore Co. Oil Co. 1.
Sec. 26, Blk. 6-T, Sneed, Prairie O. & G. Co. 2.*

Rigs

Sec. 191, Blk. 3-T, H. C. Rubert, Morton & Co. 1.

GRAY COUNTY

Rigs

Sec. 63, Blk. 3, P. A. Worley, Empire G. & F. Co. 1.
Sec. 87, Blk. 3, A. H. Holmes, Gulf Prod. Co. 1.
Sec. 88, Blk. 3, H. H. Merten, Gulf Prod. Co. 1.
Sec. 83, Blk. 3, P. A. Worley & Reynolds, Gulf Prod. Co. 1, 2, 3.
Sec. 87, Blk. 3, H. H. Merten, Humble O. & R. Co. 1.
Sec. 86, Blk. 3, D. W. Osborne, Humble O. & R. Co. 1.
Sec. 83, Blk. 3, Worley & Reynolds, Humble O. & R. Co. 1.
Sec. 87, Blk. 3, H. H. Merten, McMan O. & G. Co. 1.
Sec. 83, Blk. 3, Worley & Reynolds, McMan O. & G. Co. 1, 2.
Sec. 82, Blk. 3, Merten Bros., Magnolia Pet. Co. 1, 2, 5.
Sec. 63, Blk. 3, Benton, Pure Oil Co. 1, 2.
Sec. 82, Blk. 3, Merten Bros., Shamrock Pet. (was Clark & Baldridge) 2.
Sec. 83, Blk. 3, Worley & Reynolds, Shamrock Pet. Co. 2.
Sec. 83, Blk. 3, Worley & Reynolds, Sun Oil Co. 1.
Sec. 62, Blk. 3, Worley & Reynolds, Wilcox-Pampa Oil Co. 5.
Sec. 68, Blk. 25, J. S. Morse, Will O'Brien 1.

Wells Drilling

Sec. 83, Blk. 3, Worley & Reynolds, Shamrock Pet. Co. (was Clark & Jones) 1.
Sec. 62, Blk. 3, Worley & Reynolds, Wilcox-Pampa Oil Co. 4.
Sec. 148, Blk. B-2, C. W. Bradford, Bayshore Pet. Co. (was Williams et al) 1.

WHEELER COUNTY

Rigs

Sec. 42, Blk. 24, Bentley, Gibson Oil Corp. 1.
Sec. 41, Blk. 24, H. C. Phillips, Gibson Oil Corp. 2.*
Sec. 88, Blk. A-5, Johnson, Smith et al 1.
Sec. 11, Blk. 27, J. H. Jackson, Scott & Barner 1.

Wells Drilling

Sec. 41, Blk. B-24, H C Phillips, Gibson Oil Corp. 3.
Sec. 21, Blk. A-8, J. M. Shelton, Midwest Exp. Co. 1.*
Sec. 53, Blk. A-4, Sorenson, Smith, Brady et al (South Vernon Oil Co.) 1.*
Sec. 93, Blk. 17, Fee, Upham Gas Co. 1.
Sec. 83, Blk. 17, Roger O'Gorman, Hal H. Vaughan 1.*
Sec. 65, Blk. 13, E. L. Woodley, Ed Woodley, Jr. 1.

FOARD COUNTY

Rigs

A. T. Miller, Gulf Production Co. 1.

Wells Drilling

Burress, Central Oil Ints. 1.
Easley, Humble Oil & Refg. Co. 1.

COTTLE COUNTY

Wells Drilling

A. C. Dulaney, T. J. Woodley et al 2.*

KING COUNTY

Wells Drilling

Frank Patton, Hoffer Oil Corp. 1.*

KNOX COUNTY

Wells Drilling

Clark, Brazos Bend Oil Co. 1.*
Lawson, Robert Sanders 1.*

BAYLOR COUNTY

Wells Drilling

W. B. Mills, Brit Cranfill et al 6.
W. B. Mills, J. W. Hooser 14.

ARCHER COUNTY

Rigs

L. F. Wilson-F, Dale Oil Corp. 5.
A. B. Edwards, L. P. Hammond 1.
Plowman et al, Stewart Dev. Co. 8.
C. C. Conner, Cosden-Consolidated Oil Co. 1.
M. Kelly, Gulf Prod. Co. 1.
G. P. Meade Est., Maer & Staniforth 5.
A. J. Lowe, Magnolia Pet. Co. 23.
R. O. Prideaux-A, United Producers Co. 3.

Wells Drilling

B. G. Hasson, Allday Oil Co. 2.
C. Starr, J. D. Ashcraft et al 1.
S. G. Helm, Barnsdall Oil Corp. 1.
Perkins et al, G.J. Brown 1.
McCrory, Trustee-E, L. T. Burns 1.
W. M. Coleman, Rex Cannon et al 1.*
W. R. Brown, R. I. Carter 1.
W. T. Hutcheson, B. F. Caldwell & Consolidated Oil Co. 4.
G. T. Netherton, Consolidated Oil Co. 1.
A. J. Long, Garry Oil Co. 1.*
A. P. Nichols, Gulf Prod. Co. 41.
L. F. Wilson, H. J. Heartwell 1.*
J. H. White, Jetter & Anderson 1.
A. D. Thompson-B, M. L. Lewis et al 2.
Miller, Magnolia Pet. Co. 1-A.
Parrish Bros., McCarty Oil Co. 1.
W. L. Andrews, Mid-Kansas Oil & Gas Co. 1.
T. B. Wilson, D. Monniger et al 1.*
L. F. Wilson "F," Murchison & Fain 1.
Sarah E. Finch, Murchison & Fain & Payne 1.
Geo. Parrish, Rayzor & Seaberry 2.
L. F. Wilson "A," Shappell Oil Co. (No. 2) 5.
L. F. Wilson "B," Shaw et al 7.
J. H. Turberville "A," Simms Oil Co. 2.
H. Ford, F. S. Whitman et al 2.*
J. H. Carter, W. C. Young 1.
A. J. Lowe, Barnsdall Oil Corp. 3.
Wolf, Barnsdall Oil Corp. 1.
J. F. Rogers, Continental Oil Co. 8.
A. M. Kunkel, Cook & Reeder 1.
F. Jehlik, Cosden-Consolidated Oil Co. 2.
Longley Est., Dale Oil Corp. 1.*
J. A. Bell, Golding & Cochran 1.
A. J. Akard, Gulf Prod. Co. 1.
B. R. Jeske, Gulf Prod. Co. 9.
H. F. Harmel, Head & Heydrick 1.
Andrews, Tom Humphries 1.
R. O. Prideaux, Kell & Kruger 3.
Meade Est., Maer & Staniforth 4.
W. T. Coffield, Magnolia Pet. Co. 8.
W. H .Portwood, Magnolia Pet. Co. 12.
J. F. Rogers "B," Magnolia Pet. Co. 8.
W. H. Thomas, Marland Oil Co. 4, 5.
T. L. Blewitt, Olney Drlg. Co. 1.
L. L. Hudson, Pandem O. Corp. 1.
W. H. Thomas, Pandem O. Corp. 2.
J. A. Young, Pandem O. Corp. et al 6.
Meade Est., Phillips Pet. Co. 1, 2.
Prideaux, Pitts et al 1.*
R. O. Prideaux, Plains Prod. Co. 2.
Meade Est., "A," Shasta Oil et al 2, 2.
Parsons, Shasta Oil et al 1.
Robinson, Shaw & Rathke 1-A.
H. O. Prideaux, The Texas Company 5.
J. T. Richardson, The Texas Company 13.
Abercrombie & Taylor, Texhoma O. & R. 9.
L. J. Kunkel, Texhoma O. & R. 5.
W. J. Logan, Texhoma O. & R. 1.
R. O. Prideaux, United Producers 3.*
H. O. Prideaux, Lee Wilson 1.

CLAY COUNTY

Rigs

T. A. Matlock, Western Oil Corp. 1.
R. M. Waggoner, Simms Oil Corp. 1.

Wells Drilling

G. A. Scaling, Hamilton, Barkley & Meadows 1.
M. K. Inman, Howard Pet. Co. et al 1-A.
Holloway, Lone Star Gas Co. 20, 21, 22.
Scaling, Atlantic City P. Co. 1.*
Dowlen & Son, W. P. Ferguson et al 1.*
Worsham, Gulf Prod. Co. 1.
T. E. Teat, J. J. Jenkins 1.
J. G. Mullens, E. M. Jones 1.
Waggoner, Lone Star Gas Co. 28*, 29.
Kaufman & Jones, Western Oil Corp. 2.*

MONTAGUE COUNTY

Rigs

R. Hinds, Benton-Woods et al 10.
J. W. Maddox, Empire Gas & Fuel Co. 1.
J. W. Maddox, F. H. E. Oil Co. 1.
J. W. Maddox, Gracey & Kahle 1.
J. W. Maddox, Humble O. & R. Co. 2.
J. W. Maddox "B," Pure Oil Co. 1.
H. C. Gist "B," The Texas Company 2.
N. J. Howard, The Texas Company 1-B.
J. W. Maddox "C," The Texas Company 1.
J. E. Martin, The Texas Company 1.
N. J. Howard et al, The Texhoma O. & R. Co. 9.
J. W. Rowland et al, Texhoma O. & R. Co. 2.
Steadman, Universal Oil Co. 1.

Wells Drilling

R. Hinds, Benton-Woods et al 9.
Converns, Commercial Pet. Co. 1.
Flint et al, Farmers Creek O. & G. Co. 1.
R. Hinds "A," F. H. E. Oil Co. 6.
N. J. Howard et al, F. H. E. Oil Co. 1.
Boedecker, Grigsby Oil Co. 1.*
Cunningham, Gulf Prod. Co. 9, 10, 11, 12.
J. W. Maddox, Harris & Simons.
R. Hinds, Humble O. & R. Co. 7, 8, 9.
J. W. Maddox, Humble O. & R. Co. 1.*
Cunningham, Jamison et al 1.
R. Hinds, Lesh, McCall & Kilcrease 5.
J. W. Maddox "A," Pure Oil Co. 4.
J. B. Oldham et al, Pure Oil Co. 2.
Cunningham, Rycade Oil Co. 1, 2, 4.
E. J. Bouldin, The Texas Company 1.
Gist "A," The Texas Company 9, 10, 11, 12.
R. W. Cunningham, Texhoma O. & R. Co. 1.
N. J. Howard et al "A," Texhoma O. & R. Co. 5.
R. Hinds, Texhoma O. & R. and Republic Prod. Co. 7, 8, 9.
J. W. Rowland et al, Texhoma & Republic 3.

COOKE COUNTY

Rigs

J. P. Kidd, Pat Hudson et al 1.

Wells Drilling

Lester, Big Indian O. & G. Co. 1.*
Osborne, Elliott & Wallace 1.*
A. Hyman, C. C. Lanier et al 2.
Hamilton, Leonard & James 1.*
Houston, H. H. Simpson et al 1.*

FANNIN COUNTY

Wells Drilling

Whitting, J. W. Atkins 1.*
Moore, Erin Oil Co. 1.*
Owen, Payne, Bond et al 1.*

DENTON COUNTY

Fortenberry, Gainesville Syndicate 1.*

WISE COUNTY

Rig

R. B. White, Walker Valley Oil Co.*

Wells Drilling

Houston, R. W. Little Co. 1.
Cassidy SW Com. Co., Magnolia Pet .Co. 2.
Castleberry, Transcontinental Oil Co. 1.*

JACK COUNTY

Rigs

L. S. Wright, Pandem Oil Corp. 1.

Wells Drilling

Oliver, Buttram Pet. Co. 1.
Preston, Buttram Pet. Co. 3, 4.
Gillespie, Crabb, McNeil et al 1.*
Thomason, Dingee et al 1.
Allen, Godley Oil Co. 1.
Brown, Hastain & Purman 1.
C. C. Bloodsworth, Hill & Rutter 1.
W. T. Stewart Est., Howard et al 1.
James Ellis et al, Meeks & Foster 1.
S. M. Jones Est., Murchison & Fain 1.
Wm. Hanna, S. E. Oldham et al 1.*
Gray, Rochelle et al 1.
Cullers, Seaboard Oil Co. 1.*
First Natl. Bank, Security Drlg. Co. 1.
Snedeker, Blk. 5, Staley & Wynne 1.
Snedeker, Lot 8, Staley & Wynne 1.
Plemons, Wallace & Nichols 1.
Carpenter Est., Watchorn O. & G. Co. 1.
Wilson, Wolf Oil Corp. 1.

YOUNG COUNTY

Rigs

J. W. Collier, J. W. Collier 1.
H. L. Whitehead, Pandem Oil Corp. 2, 3.
Otto Deitrich, Sun Oil Co. 6.

Wells Drilling

A. Williams, Albright et al 1.
Stewart, Appleby et al 1.*
Rachuig "B," Atlantic O. P. Co. 5.
Earl Rogers, Barkley et al 5.
Stewart, Barkley et al 1.*
W. F. Brown, Barnes et al 1.
Stewart, Biljobul Oil Co. 1.*
Burleson & Heydrick 3-A.
H. B. Street, Bridwell & Mayfield 9.
Williams, Bridwell & Mayfield 2.*
Sanders, Camp O. & G. 1.
R. Campbell, R. Campbell 2.
Steen, Casey et al 1.*
R. H. Rachuig, Chenault & Lea 3, 4.
Honea, Consolidated Oil Co. 1.
Benson, Cosden-Consolidated Oil Co. 8.
J. P. Logan, Evans et al 1.
F. E. Wilton, Foster et al 1.
H. L. Whitehead, Hamilton & Martin 2.
H. W. Drum, Harris & Sandeford 1.
Hamilton, Humble O. & R. Co. 12.*
E. R. Prideaux, Hunt & Seigler 1.
A. C. Speer, Ilseng Prod Co. 1.*
Mrs. Chas. Ferguson, Jeffers & Jeffers 1.*
H. C. McCaghren 3, 4.
D. C. Ward, McElreath & Suggett et al 1.
Prideaux Bros., Maer & Staniforth 2.
Little, Magnolia Pet. Co. 3.
Stewart, J. J. Moran 1.
Logan, Nash & Windfohr 1.
A. A. Barnhardt, Pace Drlg. Co. 3.
Mrs. C. Williams, Ray & Massie 1.
J. W. Jack, Reed et al 2, 3.
J. W. Jones, Riggs et al 1.
W. O. Shaw, Rowe Drlg. Co. 1.
Calvin, Ryan et al 1.
M. A. Stewart, Shaw & Rathke 1, 3.
H. O. Prideaux "B," Shaw & Rathke 1.
F. C. Dailey, Stafford & Hayes 3.
Otto Deitrich, Sun Oil Co. 3, 7.
Benson, Tidal Oil Co. 1.
Benson, Walker et al 9.
W. M. Ward, Wolf Corp. 1.*
Griffin, Humphries Corp. 1.*
Donnell, Liner Drlg. Co. 1.*
Donnell, McQuain et al 1.
Corbett, Phillips Pet. Co. 2.*

THROCKMORTON COUNTY

Rigs

J. M. Parrott, Gulf Prod. Co. 1.
A. J. Ellis, Texas Pacific Coal & Oil Co. 1.

Wells Drilling

Brown "B," Gulf Prod Co. 1.
Harris, Humble O. & R. Co. 1.
Overcash, Humble O. & R. Co. 1.*
Stubblefield, Humble O. & R. Co. 1.
Elliott, Red Bank Oil Co. 1, 2.
Parrott, Red Bank Oil Co. 2, 3.
Elliott, Reiter-Foster Oil Corp. 1, 2.
Parrott, Reiter-Foster Oil Corp. 1, 2, 3.
Stubblefield, Reiter-Foster Oil Corp. 2.*
McKeichen, J. G. Adams et al 1.
Reynolds Cattle, Associated Pet. Co. 3.*
Cook, Associated Pet. Co. 1.
R. W. Kelley, Associated Pet. Co. 3.
Stevens, Humble O. & R. Co. 1.*
Tuton, Humble O. & R. Co. 1.

HASKELL COUNTY

Wells Drilling

Bunkley, Bridwell & Mayfield 1.
Ballard, Kouri et al 1.*
Colbert, Weirt & York 1.*

STONEWALL COUNTY

Craft, Arkansas Fuel Co. 1.*
Ward et al, Elder Nance 1.*
J. M. Thomas, Elder Nance 1.*
J. Q. Ward, Ward Syndicate 1.*

KENT COUNTY

Well Drilling

Barron, The Texas Company 1.*

GARZA COUNTY

Wells Drilling

Swanson, Deep Rock Oil Co. 1.
Connell "A," Emerald Oil Co. 1.*
J. M. Boren, Emerald Oil Co. 1.

LYNN COUNTY

Well Drilling

Edwards, Hart Oil Corp. 1.*

YOAKUM COUNTY

Wells Drilling

Hurdle, Covey & Klinke 1.*
Hinkle, Russell & Trunick 1.

GAINES COUNTY

Well Drilling

Lindsay, Hucony Gas Co. 1.*

SCURRY COUNTY

Rigs

Boyce, Fogelson et al 1.

Wells Drilling

J. O. Guinn, Camp Springs O. & G. Co. 1.
Welborn "A," Northwest Oil Co. 1.*

FISHER COUNTY

Wells Drilling

Isaac Harris, McCool et al 1.*
W. F. Martin, Ideal Oil Co. 1.

JONES COUNTY

Wells Drilling

Bristow, Shaw & Rathke 1.
Rowell, J. C. Yancey et al 1.*
Herndon, J. C. Yancey et al 1.*
J. Winter, Phillips Pet. Co. 1.

SHACKELFORD COUNTY

Rigs

Davis, Amerada Pet. Corp. 1.
Moberly, Derby Oil Co. 1.
Davis, Hope Pet. Co. 2.
Reynolds, Hope Pet. Co. 8.
Terry, Magnolia Pet. Co. 6.
Davis, Craig & Morton 1.
Flippen, Panhandle Refg. Co. 1.
Cook, Roeser & Pendleton & Marland Oil Co. 19-A-84, 1-A-90.
Cook, Roeser & Pendleton 3-B-84, 5-B-84, 6-B-84.
Nail, Roeser & Pendleton 1-A-121
R. J. Moberly, Tannehill Oil Co. 16.

Wells Drilling

Burns, Cady. 1.*
Nail, Carter Dev. Co. 2.
S. L. English, Barney Carter et al 1.
Colbert, Domestic Oil Co. 1.
J. B Matthews, Engle Bros. 3.
Newell, French & Lewis 1.
J. W. Erhart, Gallagher & Howland 1.*
Owens, Gilliam & Logan 1.
Reynolds, Heck et al 2.
Poindexter, Hope Pet. Co. 1.
Moberly, Hughes Dev. Co. 1.*
Cook, Humble O. & R. Co. 3.
Davis, Independent O. & G. Co. 1.
Flippen, Jackson et al 1.
Powers, Jones 1.*
Davis, Lake et al 1.*
Midkiff, Magnolia Pet. Co. 1.

XUM

Moberly, Magnolia Pet. Co. 1.
Davis, Marland Oil Co. 1.
J. B. Matthews, Marland Oil Co. 1.
Cannon, Melton Oil Co. 1.
Edwards, Melton Oil Co. 1.
Newell, Merry BMros. & Perini 1.
F. W. Alexander, Milham Corp. 1.*
Z. W. Casey, Milham Corp. 3.
Sedwick, Milham Corp. 1.
Snyder, Moutray Oil Co. 3-B.
E. M. Stephens, M. H. Overlees 2.
E. A. Jeter, Reclamation Oil Co. 1.
Colbert, Richardson Bros. 1.
King, Richardson Bros. 1.
Davis, Robert Oil Corp. 1.
Cook, Roeser & Pendleton and Marland Oil Co. 1-A-81, 3-A-84, 6-A-84, 7-A-84, 8-A-84, 12-A-84, 2-A-85, 7-A-85, 8-A-85, 9-A-85, 15-A-85.
Cook, Roeser & Pendleton 2-B-84, 4-B-84, 4-B-85, 9-B-85.
Poindexter, Spoonts et al 1.*
Poindexter, C. E. Waterbury et al 1.
Matthews, Wells et al 1.

STEPHENS COUNTY

Rigs

Hill, Mid-Kansas O. & G. Co. 19.
Morrison, Mid-Tex Oil Co. 2.*
O. L. Moon, Phillips Pet. Co. 2.
Martin, Texas Consolidated Oil Co. 8.
Houston, Eidson et al 2.
J. M. McPherson, Hucony Gas Co. 1.

Wells Drilling

Ward "C," Gulf Prod. Co. 1.
Hamil, Humble O. & R. Co. 1.
Richardson, Humble O. & R. Co. 1.*
Coody, Kenridge Oil Co. 1.
Vick, Law et al 1.
Hill, Acct. 1, Mid-Kansas O. & G. Co. 14.*
Hill, Mid-Kansas O. & G. Co. 18, 10.
Hill, Acct. 2, Mid-Kansas O. & G. Co. 1.
Richardson, Mid-Kansas O. & G. Co. 2.
Cunningham, Mid-Tex Oil Co. 6.
Vick, Mid-Tex Oil Co. 1.
Martin, Pennok Oil Co. 8.*
Knox, Republic Prod. Co. 7.
Crowley, Rhodes & Higher 4.*
Cobb, Swensondale Oil Co. 8.*
Bradford, Adamson & Fouts 1.* 2.6
Vick, Atkinson & Sandefer 1.
Compton, Bateman & Campbell 1.
Norvell, Brown & Co. 1.*
Satterfield Heirs, Chastain & Donley 1.
M. A. McNabb, Clark & Hooker 1.
Goforth, Corzelius Bros. 1.*
Post, Edison et al 3.
McCauley, Herbert Oil Co. 1.*
Parks, Hickok Prod. Co. 2.
Long, Hucony Gas Co. 1.*
Long, Hucony Gas Co. 1.*
Brown, Humble O. & R. Co. 1.*
Houston, Humble O. & R. Co. 1.
Standford, Humble O. & R. Co. 1.
Christenson, Livingston et al 1.*
Chesley, Meredith & Thomas 1.
Glasscock, Meyer & Kramer 1.
Elder, Pender Prod. Co. 2.*
Hart, Pender Prod. Co. 2.*
R. M. Akin, Phillips Pet. Co. 4.
Moon, Producers Union Oil Co. 1.*
Rush, Roeser & Pendleton 1.
C. E. Sikes, States Oil Corp. 4.
Stuart, Strawn Pet. Co. 24.
Swenson, Swensondale Oil Co. 32.*
Taylor, Swensondale Oil Co. 1.*
Parks, Texas Fidelity Oil Co. 2.
Binney, Texas Pacific C. & O. Co. 63.
Veals, Texas Pacific C. & O. Co. 11.
Curry, The Texas Company 2.

PALO PINTO COUNTY

Rigs

Fee, Texas Pacific C. & O. Co. 26.

Wells Drilling

Dalton, Dalton Oil Co. 6.
Dalton, M. Dalton 1.*
Strawn C. Co., Dalton McKee O. Corp. A-1.
Edgin, Dalton 1.
Guest, Goodwin & White 1.
Cardwell, Hart 1.
Orme, Hart 1.*
J. H. Robinson, Moore & Snebold 2.
Rasmussen, Pender Prod. Co. 2.*
Costello Bros., Whatley et al 1.*

PARKER COUNTY

Wells Shut Down

Stickford, Coffin et al 1.*
Davis, Monroe 1.*

HOOD COUNTY

Well Drilling

Cook, Parsons et al 1.

ERATH COUNTY

Wells Shut Down

Barton, Gillett 1.*
Laney, Goodwin 4.*
Finch, Nelson Oil Synd. 3.*

EASTLAND COUNTY

Rigs

G. P. Wright, Eastland Oil Co. 2.
W. C. McFadden, Gulf Prod. Co. 1.
J. D. Parsons, Gulf Prod. Co. 2, 3.
J. D. Parsons "A," Gulf Prod. Co. 4-A.
P. G. Wright, J. E. Lewis et al 2.
Farmers State Bank, Mid-Kansas O. & G. Co. 1.
W. P. Gullett, Robert Oil Corp. 1.
W. U. Fox, Shinholt & Heslip 1.
J. E. Butler, Texas Pacific C. & O. Co. 27.
Fee (Van Norman), Texas Pacific C. & O. Co. 1.
C. H. Lee, Lewis et al 1.
Allen, Shasta Oil Co. 1.
Ben Cove, World Oil Co. 1.

Wells Drilling

Allison, Corzelius Bros. 1.
Garrett, Corzelius Bros. 1.
Fox, Evans et al 1.
J. L. Hankins, Gates Oil Corp. 5.
Richmond, Greene Prod Co. 1.*
Kinnebrew, Gulf Prod. Co. 7.
J. D. Parsons, Gulf Prod Co. 1.
J. D. Parsons "A," Gulf Prod. Co. 5.
Parsons, Humble O. & R. Co. 1.
Ford, Magnolia Pet. Co. B-1.
Harris, Magnolia Pet. Co. 11.
Motes, Parsons et al 4.
Parsons, Prairie O. & G. Co. 1.
W. F. Davenport, States Oil Corp. 4.
Durocher, Texas Pacific C. & O. Co. 1.
Grove, Adams et al 1, 2.*
Connellee, Amyx et al 2.
Hill, Barkley and Crotty 1.
Terry, Delaney 1.
Proctor, Eastland Oil Co. 1.
Murrell, Hamon & Conley 1.
Owen et al, Hickok P. & Dev. Co. 1.
Bell, Inglewright et al 1.
Johnson, McBride 1.*
Butler, Mook et al 1.
L. M. Clark, Navarro Oil Co. 1.
Strickland, Root et al 1.
White, Rumbaugh & Thompson 1.*
Morgan, Simon et al 1.
Noble et al, The Texas Company 1.

CALLAHAN COUNTY

Rigs

Boydston, Gibson & Johnson 1.*
Powell & Leggett, Hughes Dev. Co. 1.
J. B. McDonough, Prairie O. & G. Co. 9.
B. B. Bond, T. B. Slick 2.
L. A. McDonough, T. B. Slick 1.

Wells Drilling

Windham, Adams et al 1.
Sawyer, Bradstreet et al 1.
Cutbirth, Canary et al 1.
D. H. Derrington, Canyon O. & G. Co. 4.
Jackson, Denny & Andrews 1.*
J. A. Miller, Flannigan et al 1.
Ellis, French & Lewis 1.
Yost, French & Lewis 1.
Smith, Gibson & Johnson 1.
Jackson, Goodloe & Duffy 1.*
Cutbirth, Hughes Dev. Co. 1.
Freeland, Hughes Dev. Co. 1.
Minnock, Ingleright 1.
Steel, McCamey et al 1.*
Moore, Mission Drlg. Co. 1.
Cutbirth, Mississippi Valley Oil Co. 1.
Huling, C. O. Moore 1.
Wm. James, Moutray Oil Co. 1.
Long, Nichols et al 1.
Baum, Prairie O. & G. Co. 1.
Bond, Prairie O. & G. Co. 1, 2.
Cunningham, Prairie O. & G. Co. 2.
Young, Roeser & Pendleton 1.
Bond, T. B. Slick 1.
Harris, So. Pet. Exploration Co. 1.
Alvord, White Eagle O. & R. Co. 1.

TAYLOR COUNTY

Wells Drilling

R. H. Anderson, Sanger O. & R. Co. 1.*
Norwood, Sanger O. & R. Co. 1.

MITCHELL COUNTY

Rigs

Mary Foster, Magnolia Pet. Co. 2.
Ellwood, Mid-Kansas O. & G. Co. 2.
C. A. Hardee, Texas & Stivers 1.

Wells Drilling

Womack, Atlantic O. P. Co. 5.
W. L. Foster, Lse. 1, The California Co. 1.
C. M. Adams, Lse. 3, The California Co. 1.
J. D. Pettiflis, Lse. 1, The California Co. 1.
C. M. Adams, Lse. 2, The California Co. 3.
H. C. Miller, Lse. 4, The California Co. 6.
C. M. Adams, Lse. 3, The California Co. 2.
F. E. McKenzie, B. H. Cogdell 1.*
C. M. Adams, Magnolia Pet. Co. 4, 5.
P. C. Coleman, Magnolia Pet. Co. 1.
Kloh & Rumsey, Magnolia Pet. Co. 1.
Hyman, Morrison & Thompson 1.
C. P. Conoway, Owen & Sloan 1.

HOWARD COUNTY

Rigs

Dora Roberts, Lockhart & Carey 1.

Wells Drilling

W. T. Scott, Deep Rock O. & R. Co. 1.
Otis Chalk, Lockhart & Carey 1.
Scott, Lockhart & Carey 1.
Otis Chalk, Marland Oil Co. 1.
Otis Chalk, Magnolia Pet. Co. 1.
Chalk, Owens & Sloan 2.
H. R. Clay, Reeves & Apperman 1.
Roberts, Transcontinental Oil Co. 1.

CULBERSON COUNTY

Wells Drilling

Kloh & Rumsey, Deep Rock Oil Co. 1.
Mrs. G. H. Quaid, Pure Oil Co. 1.

LOVING COUNTY

Well Drilling

R. L. Allen, Lockhart & Co. 1.

WINKLER COUNTY

Rigs

Kloh & Rumsey, Brandon & McCamey 1.
J. W. Amburgey, L. D. Ladd et al 1.

Well Drilling

T. G. Hendrick, P. A. Westbrook et al 1.

ECTOR COUNTY

Rigs

G. W. Connell "A," J. S. Cosden, Inc. 1.*
W. P. Edwards, Simms Oil Co. 1.
E. P. Cowden, Llano Oil Co. 1.

Wells Drilling

W. E. Connell, J. S. Cosden 1 "B."
J. W. Buchanan, Skinner et al 1.
Kloh & Rumsey, The Exploration Co. 1.
J. L. Johnson, Henry Zweifel et al 1.

MIDLAND COUNTY

Wells Shut Down

Jones, M. Agress et al 1.*
Hill, Rook & Zimmerman 1.*

GLASSCOCK COUNTY

Wells Drilling

W. H. Sparkman, Case & Hoover 1.*
Nellie Calder, Marland Oil Co. 1.

STERLING COUNTY

Wells Drilling

Douthitt, Co-Operative Lease & Dev. Co. 1-A.
L. T. Clark, Deep Rock Oil Co. 1.
L. T. Clark, H. D. Rummell 2.*
J. T. Davis, The California Co. 1.
C. A. Broome, The Exploration Co. 1.

COKE COUNTY

Well Drilling

E. C. Rawlings, Llano Oil Co. 1.

COLEMAN COUNTY

Rigs

Dibrell, Burke-Greis Oil Co. 8.
W. A. Smith, Jewell & Sill 1.
Morris, Midwest Exp. Co. 1.
Dibrell, Zweifel et al 1.
Wm. Pfleuger, Jewell & Sill 1.

Wells Drilling

Morris, Bateman & Campbell 1.
Dibrell, Burke-Greis Oil Co. 4.
Dibrell, Burke-Greis Oil Co. and Gwinnup 7.
Sealy & Smith, Curtis et al 1.
Crawford, English et al 1.*
Harris, English et al 1.*
Dibrell, Gilman et al 1.
Morris, Hughes Dev. Co. 1.
Weathered, Humble O. & R. Co. 1.
Dibrell, Independent O. & G. Co. 3, 4.
Love, McChesney 1.*
Dibrell, Mid-Kansas O. & G. Co. 1.* 2.*
Dibrell "A," Midwest Exp. Co. 3, 4.
Edmondson, Miller & Stovall 1.*
Lobstein, Mitcham et al 1.
Harris, National O. & R. Co. 1.
J. W. Harris, Ramsey & Maxey 1.
Hall, Reeves & Meredith 1.
Morris, Ross & Wright 1.
Hubbard, Root 1.
Gray, Urban 1.
West, Wilford et al 1.
Hutchings, Wright & McNallen 1.
Campbell, Bartlett 1.
W. A. Ellis, S. C. Canary et al 1.
J. W. Harris, Monroe Prod. Co. 1.
Overall, Monroe Prod. Co. 2.
Pitty, McKenzie et al 1.*
Burk, Morrison & St. John 1.*
Cox, Neely et al 1.*
Johnson, Newby et al 1.
Mrs. M. E. Trimmins, Ross & Carter 1.
Stewardson, Ross & O'Conner 1.*
Garrett, Shadbolt & Creighton 1.
Deavers, Van Eman et al 1.

BROWN COUNTY

Rigs

J. M. Kennedy, Choate et al 1.
R. G. Hewley, Christie et al 1.
Kilgore Bros., Curry & Moore 2.
J. J. Smith, Empire Gas & Fuel Co. 1.
Kilgore Bros., P. L. Hoffman 3, 4.
J. H. Allen, Humble O. & R. Co. 3.
J. H. Allen "B," Humble O. & R. Co. 8, 9.
W. W. Allen, Humble O. & R. Co. 2, 3.
Kilgore Bros., Humble O. & R. Co. 1.
E. P. & W. H. Kilgore "B," Humble O. & R. Co. 3, 5.
A. Leatherwood, Humble O. & R. Co. 5.
J. Wooldridge, McLester Oil Co. 4.
W. M. Wooldridge, McLester Oil Co. 5.
R. L. Westerman, Pandem Oil Corp. 4.
T. L. Dunn, Phillips Pet. Co. 6, 7.
J. H. Prater, Phillips Pet. Co. 3.
W. S. Johnson, Prairie O. & G. Co. 1.
W. A. Prater, Schaffner & Wilson 11.
W. A. Stout, The Texas Company 1.

Wells Drilling

F. W. Turner, Amerada Pet. Corp. 1.
R. L. Holt, Anderson & Shults 1.
W. W. Allen, Barkley & Conway 3, 4.
Dunn, Bedichek 1.*
McClanahan, Berryman et al 1.*
Graham Est., Bowers 1.
Boysen, Boysen & Ramsier 1.
Weedon, A. J. Brown 1.
J. G. Gaines, Brown & Co. 2.
Stapp, Carter et al 1.*
Nixon, Carter et al 1.
Baxter, J. S. Cosden, Inc. 9.
Westerman, J. S. Cosden, Inc. 11.
Elmo Williams "A," J. S. Cosden, Inc. 3, 9.
Kilgore Bros., Curry & Moore 1.
Church Lot, Curry & Moore 1.
G. W. Pickett, Jr. "A," Curry & Moore 1.
Prater, Curry & Moore 2.
Graham Est., Douglas et al 1-A.
Mrs. M. J. Sayles, Dozier & Bowers 1.
Butler, Fagg et al 2.*
Carmichael, Gibson Oil Corp. 1.
White, Gibson Oil Corp. 1.
J. P. Newton, R. G. Gillespie 6.
Harrell, Goldrick & Baker 1.
Armstrong, Harris, Hayes Co. 1.*
Gaines, Hepburn Oil Co. 3.*
J. H. Prater, S. S. Herring 3.
E. P., C. M., & W. H. Kilgore, P. L. Hoffman 2.
Keller, Holdeman 1.
Arledge, Hughes Dev. Co. 12, 13.
J. H. Keller, J. K. Hughes Dev. Co. 2.
J. Wooldridge, Hughes Dev. Co. 1.*
J. H. Allen "B," Humble O. & R. Co. 5.
J. I. Foster, Humble O. & R. Co. 1.
J. T. Hodnett, Humble O. & R. Co. 4.
J. C. Kilgore "B," Humble O. & R. Co. 2, 4, 5.
E. P. & W. H. Kilgore "B," Humble O. & R. Co. 2, 4.
E. P. & W. H. Kilgore "C," Humble O. & R. Co. 1, 2.
E. P. & W. H. Kilgore "D," Humble O. & R. Co. 1.
Stover, Humble O. & R. Co. 4, 5.
W. A. Prater, H-W Drilling Co. 7.
L. V. Edington, Ingleright et al 4, 5.
Graham Est., Jarvis et al 1.
Cook, Keough Bros. 1.*
Fry, Lester 1, 2.
Hensiee, Louisiana O. & R. Co. 1.
J. I. Foster, J. E. McKenna 1.
J. Wooldridge, McLester Oil Co. 1-A, 5.
Gaines, McMan O. & G. Co. 1.*
L. V. Eddington, Mahlstedt Oil Co. 2.
J. H. Newton, Mendenhall et al 11.
Suttles, Midwest Exploration Co. 4, 5, 6, 7.
Keeler, Mitcham 1.*
Lehman, J. W. Moore 1.
Hill, Nelson & Crabtree 1.
Westerman, Pandem Oil Corp. 3.
T. L. Dunn, Phillips Pet. Co. 4, 5.
G. W. Pickett, Jr., Prairie O. & G. Co. 8.
J. F. Pickett, Prairie O. & G. Co. 1.*
Trammel, Prairie O. & G. Co. 1.
Turner, Prairie O. & G. Co. 1.
Wooldridge, Prairie O. & G. Co. 6.
Jones, Ratblott 1.
Stout, Ray & Co. 1.
W. A. Prather, Rhodes & Higher 11.
M. J. Suttles, Root et al 5.
Buzbee, Root & Rhodes 1.
Henson, Shaffner & Ramsey 1.
Gaines, Simms Oil Co. 8.*
Newton, T. B. Slick 2.
Graham Est., E. L. Smith Oil Co. 2.
Eubanks, States Oil Corp. 1.
Giddings, Superior Oil Corp. 1.
W. S. Johnson, The Texas Company 1.
Patterson, Thomas & Reynolds 1.*
Roe, Troutt et al 1.*
A. B. Teston, Valley Oil Co. 1.
Newton, West & H-Y Oil Co. 5, 6, 7, 8.
H. A. Newton, Williamson et al 4, 5, 6.
L. H. Bettis, Arkansas Fuel Co. 1.
Ferguson, Arkansas Fuel Co. 1.
Pierce, Campbell & Rosenfield 1.*
Roidan, Cox & Spratt 1.
C. E. Taylor, Fain et al 1.
Mrs. W. A. Taber, Holliday et al 1.
Denman, Hynes et al 1.*
Smith, Lightfoot et al 1.
Browder, Mitcham & Logan 1.*
W. E. Hester, G. P. Mitcham 1.
Eabs, Moore & Fuhrman 1.*
Karnock, Morris 1.*
Mattock, Savings & Scoggins 1.*
Cleveland, Schoonmacher 1.
Hall, Shadbolt & Creighton 1.*

CROCKETT COUNTY

Rigs

Powell "A," Gulf Prod So. 5-B (This is correct—No. 5-B on tract A).
Powell, J. K. Hughes Dev. Co. 2-A.
Powell, Humble O. & R Co. 10.

Wells Drilling

University, The California Co. 2.
Powell, Cromwell 4, 5.
J. M. Shannon, Crockett Drlg. Synd. 2.
Couch, Cumberland O. & G. Co. 1.*
Noelke, J. S. Cosden, Inc. 1.*
Powell "A," Gulf Prod. Co. 4-B.
Powell, Humble O. & R. Co., 5, 6, 8, 9.
Powell, J. K. Hughes Dev. Co. 1-B.
J. M. Shannon, Magnolia Pet. Co. 1.
J. S. Todd, Marland Oil Co. 1.*
University, S. M. Schaffer et al 1.
J. M. Shannon, Ben Simon et al 1.
University, H. F. Wilcox O. & G. Co. 1.
University, H. F. Wilcox O. & G. Co. 1.
R. Massie, Young et al 1.
University, Zoch et al 1.

REAGAN COUNTY

Rigs

University, Big Lake Oil Co. 76, 79, 80, 82, 86, 87, 88, 89.
University, Texon O. & L. Co., Group 1, 47, 48.

Wells Drilling

University, Big Lake Oil Co. 57, 68, 69, 70, 71, 72, 73, 74, 75, 77, 78, 81, 83, 84, 85, 3-B, 4-B, 5-B, 7-B, 8-B, 17-A.
University, Camp et al 1.
Sawyer Cattle Co., Marland O. Co. (Mascho) 1.
Sawyer Cattle Co., Marland O. Co. (Pickrell) 1.
Wolters, Simon et al 1.
University, Tannehill et al 1.*
University, Texon O. & L. Co. of Texas 1.
University, Texon O. & L. Co., Group 1, 38, 39, 40, 42, 3-A, 4-A, 5-A, 6-A.

UPTON COUNTY

Rigs

R. Ricker, Humble O. & R. Co. 1.
L. Taylor, Independent O. & G. Co. 8.
Sanger, Marland Oil Co. 8.
Burleson, Marland Oil Co. 9.
R. H. Estep, Roxana Pet. Corp. 1.
Burleson, Sun Oil Co. 1.
R. King, The Texas Company 1.

Wells Drilling

Burleson, Dixie Oil Co. 4, 5.
E. S. Hughes, Dixie Oil Co. 2.
McElroy, Gulf Prod. Co. 1.
Sanger, Gulf Prod. Co. 1.
Emma Wooley, Independent O. & G. Co. 1.
Rankin, Kirkwood et al 1.
Sanger, Marland Oil Co. 2, 4, 5.* 6, 7.
Burleson, Marland Oil Co. 4, 5, 6, 7, 8, 1-A.
E. S. Hughes, Marland Oil Co. 1-B.
M. L. Baker, Republic Prod. Co. 3.
G. V. Bull, Sartain Bros. & Davis 1.*
Union Land Co., The Texas Company 1.*
University, Willis Campbell et al 1.

CRANE COUNTY

Rigs

P. J. Lea, Cranfill Bros. Oil Co. 1.
University, Tidal Oil Co. 1.

Wells Drilling

Jax Cowden, Cordona O. & Potash Co. 1.
Connell, J. S. Cosden, Inc. 1.
O'Keefe (Univ.), Magnolia Pet. Co. 1.
E. S. Hughes "A," Marland Oil Co. 1.
W. F. Durham, Marland Oil Co. 1.
E. S. Hughes "C," Marland Oil Co. 1.
Jax Cowden, Penn Tex Dev. Co. 1.
Union Land Co. "F," The Texas Company 1.
Jax Cowden, The Texas Company 1.*

REEVES COUNTY

Rigs

State, Gresham & Hunter 1.*
Kloh & Rumsey, Humble O. & R. Co. 1.
Abrams, Schooler, Slack et al 1.

JEFF DAVIS COUNTY

Wells Drilling

Wingo, Herbert Oil Co. 1.
W. W. McCutcheon, Humble O. & R. Co. 1.

PECOS COUNTY

Rig

Scharff, Blackman, Cromwell & Kimberlin 1.

Wells Drilling

A. A. Gray, Tom Adams Oil Co. 1.* 2.*
Hershenson, Dixie Oil Co. 1.
Townsite, Quinby et al 1.*
Perry, Transcontinental Oil Co. 1.
Macy, West Texas Exploration Co. 1.

COMANCHE COUNTY

Rig

Chapman, Suddereth et al 1.

Wells Drilling

Evans, Brown Brig. Co. 1.
Campbell, Dublin Dev. Corp. 1.*
Utterback, Trojan Oil Co. 1.*

CONCHO COUNTY

Well Drilling

Schultz, Kemper Kimberlin 1.

TOM GREEN COUNTY

Wells Drilling

Llano Co. School Land, M. D. Bryant et al 1.
L. T. Clark, Roxana Pet. Corp. 1.
Pulliam, World Oil Co. 1.*

IRION COUNTY

Wells Drilling

Sawyer Cattle Co., Oklavania Oil Co. 1.
Ash Bros., P. H. Williams 1.*

SCHLEICHER COUNTY

Rig

Sol Meyer, Cope & Dalton 1.

Spudded and Shut Down

J. A. & W. T. Whitten, Beavers & Leath 1.*

SUTTON COUNTY

Well Drilling

Allison, Chesapeake Oil Co. 1. (fsg.)

VAL VERDE COUNTY

Wells Drilling

Moore Est., A. Blume 1.
Russell & Weathersbee, East Del Rio Oil Co. 1.*
Whitehead, Independent Operators 1.
Harrison, Plateau O. & G. Co. 1.

TERRELL COUNTY

Well Shut Down

Sowden, E. T. Williams et al 1.*

BREWSTER COUNTY

Wells Drilling

J. P. Wilson, Green Valley Oil Co. 2.*
Skinner, Roseborough & Skinner 1.

PRESIDIO COUNTY

Wells Drilling

Tootle Estate, Headlock & Miller 1.

(Note: *Indicates well shut down).

MISCELLANEOUS PANHANDLE

DALLAM COUNTY

Sec. 9, Blk. 47½, James, James et al 1.*

HALL COUNTY

Sec. 8, Blk. 18, G. M. Bass, Midwest Drlg. Co. 1.

HANSFORD COUNTY

Rig

Sec. 50, Blk. 2, F. A. Davis, Dillard et al 1.

HARTLEY COUNTY

Rigs

Sec. 58, Blk. XR, Coots, W. H. Holmes 1.
Sec. 63, Brovo Sub., Shelton, Humble O. & R. Co. 1.
Sec. 2, Blk. LS, E. S. Collins, Milham Corp. 1.

Wells Drilling

Sec. 9, Blk. 2, Lyman & Balfour, Deep Rock Oil Co. 1.

HEMPHILL COUNTY

Rigs

Sec. 119, Blk. 41, Hoover, Hoover et al 1.
Sec. 4, Blk. GH&H, C. H. Shaller Est., Hoover et al 1.

LIPSCOMB COUNTY
Rigs
Sec. 504, Blk. 43, A. Barton, Snyder et al 1.
OCHILTREE COUNTY
Rigs
Sec. 471, Blk. 43, R. H. Moore, Harris & Schaffer 1.
Bowen, Standard Dev. Co. 1.
POTTER COUNTY
****
Sec. 3, Blk. 1, J. A. Jones, Farmers Oil & Gas Co. 1.
Wells Drilling
Sec. 3, Blk. 1, J. A. Jones, Gulf Prod. Co. 1.
SHERMAN COUNTY
Rigs
Sec. 35, Blk. 2, Lee Bivins, Eclipse Oil 1.
Sec. 35, Blk. 2, Lee Bivins, Get Oil 1.
Sec. 161, Blk. 1-C, Chas. Roach, Savoy Oil 1.
SWISHER COUNTY
Wells Drilling
L. M. Woodward, Overson & Keagans 1.*
WICHITA COUNTY
Rigs
Mrs. Lillis Morgan, O. C. Somers et al 1.
H. B. Hines, J. W. Hooser 3.
Burnett, Madison Oil & Gas Co. 15.
Bertha Ramming, Magnolia Pet. Co. 2.
Wells Drilling
H. Willis, Dr. Bailey et al 1.*
H. Willis, Dr. Bailey et al 2.*
Warren, Cozy Oil Co. 10.*
Warren, Cozy Oil Co. 11.*
Warren, Cozy Oil Co. 12.*
L. F. Potter, Humble Oil & Refg. Co. 1.
J. F. Kiel, Kell, Chapman & Porter 1.*
Miller, H. M. Longet et al 1*.
O. C. Beach, Magnolia Pet. Co. 13.
H. Reilly, Magnolia Pet. Co. 129.
H. Reilly, Magnolia Pet. Co. 130.
Beach, Texhoma & Magnolia 1-A.
C. Birk & W. F. George, O'Donohoe & Gates 1.
W. H. Chilson, Sec. 3, W. B. Omohundro 1.
W. H. Chilson, Panhandle Refg. Co 1
W. H. Chilson, Block 12, Stump & Co. 1.
Kemp & Kempner, Block 41 Oil Co 10.
G. Jennings-B, Bullington-Lee & Pendleton 2.*
Kemp & Kell, F. P. Cullum et al 1.
E. E. Goetze, Evangeline Pet. et al 1.
Marshall, Hawkins, Hester et al 1.
Allingham-A, Hereford Oil Co. 2.*
C. Pettit, Harry Hines 1.
H. B. Hines, Humble Oil & Refg. Co. 6-A.
S. S. Fassett, Kimmell, Dillard & Bowen 1.
Honaker, Magnolia Pet. Co. 71.
Douglas-McDonnald, Magnolia Pet. Co. 11.
Peeler, Magnolia Pet. Co. 4.
S. Pratt-A, Magnolia Pet. Co. 18.
Rio Bravo Oil Co., Magnolia Pet. Co. 55.
L. O. Saunders, John O'Neil 7.
G. L. Woodward, John O'Neil et al 1.
Edgerly-A, Geo. Pace 5.
W. Overby, T. F. Fyle et al 2.
Bywaters, Red River Oil Co. 8.*
McClure, Rubsam & Hunter et al 1.
Henson, Ryan Pet. Co. 3.*
G. L. Nance, Ryan Pet. Co. 63.*
G. L. Nance, Ryan Pet. Co. 65
G. L. Nance, Ryan Pet. Co. 66.
G. L. Nance, Ryan Pet. Co. 67.
G. L. Nance, Ryan Pet. Co. 70.
J. A. Fisher, Petroleum Invst. Co. 20.
B. Ramming, Skelly Oil Co. 6.
C. Ramming, Skelly Oil Co. 12.
C. Ramming, Skelly Oil Co. 13.
W. T. Waggoner, L. J. Stump & Co. 1
Wells Drilling
G. Jennings-A, United Producers Co. 6.
T. L. Burnett, Virginia Oil Assn. 25.
E. Daume, A. T. Wolfe 4.
WILBARGER COUNTY
Rigs
W. T. Waggoner-A, Humble Oil & Refg. Co. 6.
W. T. Waggoner-L, Milham Corp. 12.
W. T. Waggoner-A, Phillips Pet. Co. 13.
W. T. Waggoner-H, Phillips Pet. Co. 6.
W. T. Waggoner-I, Phillips Pet. Co. 4.
W. T. Waggoner-L, Phillips Pet. Co. 3.
W. T. Waggoner-L, Phillips Pet Co. 4.
W. T. Waggoner-L, Phillips Pet. Co. 5.
W. T. Waggoner-N, Phillips Pet. Co. 1.
W. T. Waggoner-N, Phillips Pet Co. 2.
W. T. Waggoner-Q, Phillips Pet. Co. 4.
W. T. Waggoner-T, Phillips Pet. Co. 4.
W. T. Waggoner-Y, Phillips Pet. Co. 1.
W. T. Waggoner-Y, Phillips Pet. Co. 2.
W. T. Waggoner-HH, Phillips Pet. Co. 3.
W. T. Waggoner-NN, Phillips Pet. Co. 7.
W. T. Waggoner- P, Phillips Pet Co. 2.
W. T. Waggoner-QQ, Phillips Pet. Co. 8.
W. T. Waggoner-A, Prairie Oil & Gas Co. 5.
W. T. Waggoner-B, Prairie Oil & Gas Co. 3.
Guyer, Stewart et al 1.
Wells Drilling
Allison, J. B. Alford Oil Co. 1.*
Stephens-A, Barkley & Meadows 10.*
Stephens-A, Barkley & Meadows 13.
Stephens-B, Barkley & Meadows 7.
W. T. Waggoner, F. Beatty, 2.*
W. T. Waggoner, B. Brewer 1.*
Dill, Bridwell & Heydrick 12.
W. T. Waggoner, Bridwell & Heydrick 1.
W. T. Waggoner, Burton 1.*
Stephens, Empire Gas & Fuel Co. 37.
Stephens, Empire Gas & Fuel Co. 38.
Stephens, Empire Gas & Fuel Co. 39.
Stephens, Empire Gas & Fuel Co. 41.
Stephens, Empire Gas & Fuel Co. 42.
Stephens, Empire Gas & Fuel Co. 43.
Stephens, Empire Gas & Fuel Co. 44.
Stephens, Empire Gas & Fuel Co. 45.
Stephens, Empire Gas & Fuel Co. 46.
Bond-B, Humble Oil & Refg. Co. 5.*
Castleberry, Humble Oil & Refg. Co. 24.
Chauncy & Gambill, Humble Oil & Refg. Co. 1.
Stephens, Humble Oil & Refg. Co. 47.
Stephens, Humble Oil & Refg. Co. 49.
W. T. Waggoner-H, Humble O. & R. Co. 10.
W. T. Waggoner-H, Humble O. & R. Co. 12.
W. T. Waggoner-H, Humble O. & R. Co. 13.
W. T. Waggoner-H, Humble O. & R. Co. 14.
W. T. Waggoner-K, Humble O. & R. Co. 2.
W. T. Waggoner-K, Humble O. & R. Co. 6.
W. T. Waggoner-M, Humble O. & R. Co. 7.
W. T. Waggoner-M, Humble O. & R. Co. 8.
W. T. Waggoner-M, Humble O. & R. Co. 9.
W. T. Waggoner-M, Humble O. & R. Co. 10.
W. T. Waggoner-M, Humble O. & R. Co. 11.
W. T. Waggoner-M, Humble O. & R. Co. 12.
W. T. Waggoner-N, Humble O. & R. Co. 3.
W. T. Waggoner-N, Humble O. & R. Co. 4.
W. T. Waggoner-O, Humble O. & R. Co. 7.
W. T. Waggoner-O, Humble O. & R. Co. 8.
Wells Drilling
W. T. Waggoner-O, Humble O. & R. Co. 9.
W. T. Waggoner, Kelly et al 1.
Fee, Magnolia Pet. Co. 72.
W. R. Piper, Magnolia Pet. Co. 50.
F. A. Sumner, Magnolia Pet. Co. 54.
More-Waggoner, Magnolia Pet. Co. 2.
W. T. Waggoner-A, Milham Corp. 2.*
W. T. Waggoner-A, Milham Corp. 3.*
W. T. Waggoner-B, Milham Corp. 1.
W. T. Waggoner-B, Milham Corp. 4.
W. T. Waggoner-D, Milham Corp. 1.
W. T. Waggoner-H, Milham Corp. 1.
W. T. Waggoner-H, Milham Corp. 10.
W. T. Waggoner-H, Milham Corp. 11.
W. T. Waggoner-J, Milham Corp. 1.
W. T. Waggoner-L, Milham Corp. 13.
W. T. Waggoner, Miller Oil Co. 2.*
W. T. Waggoner, Miller Oil Co. 3.
Streit, Murchison & Fain 1.*
Dill-B, Petroleum Prod. Co. 3.*
W. T. Waggoner-C, Phillips Pet. Co. 1.
W. T. Waggoner-D, Phillips Pet. Co. 7.
W. T. Waggoner-F, Phillips Pet. Co. 9.
W. T. Waggoner-L, Phillips Pet. Co. 2.
W. T. Waggoner-Q, Phillips Pet. Co. 3.
W. T. Waggoner-Z, Phillips Pet. Co. 1.
W. T. Waggoner-T, Phillips Pet. Co. 2.
W. T. Waggoner-T, Phillips Pet. Co. 3.
W. T. Waggoner-T, Phillips Pet. Co. 5.
W. T. Waggoner-QQ, Phillips Pet. Co. 7.
W. T. Waggoner-HH, Phillips Pet. Co. 1.
W. T. Waggoner-JJ, Phillips Pet. Co. 2.
W. T. Waggoner-NN, Phillips Pet. Co. 5.
W. T. Waggoner-NN, Phillips Pet. Co. 6.
W. T. Waggoner-QQ, Phillips Pet. Co. 7.
W. T. Waggoner QQ, Phillips Pet. Co. 9.
W. T. Waggoner-QQ, Phillips Pet. Co. 10.
W. T. Waggoner-UU, Phillips Pet. Co. 1.
W. T. Waggoner-WW, Phillips Pet. Co. 1.
W. T. Waggoner-WW, Phillips Pet. Co. 2.
W. T. Waggoner-AAA, Phillips Pet. Co. 1.
Woodward, Plost et al 1.*
W. T. Waggoner-A, Prairie Oil & Gas Co. 4.
Kemp, Quincy Oil Co. 2.*
Rio Bravo Oil Co., Sec. 19, Rio Bravo Oil Co., 1.
W. T. Waggoner-B, Rondeau 1.
W. T. Waggoner-C, Pondeau 1.
W. T. Waggoner-C, Roxana Pet. Corp. 2.
W. T. Waggoner-D, Roxana Pet. Corp. 1.
W. T. Waggoner, C. L. Sloan 2.
W. T. Waggoner-A, Waggoner Refg. Co. 3.
Ross, Wanderer Oil Co. 1.*
C. Zipperle, Weir 1
Milner, Whitehead et al 1.
W. T. Waggoner, Whitehead et al 1.*
Haney, G. C. Wood, 1.* 1.
HARDEMAN COUNTY
Wells Drilling
Wheat, Benedum & Trees 1.*
Evans, Staley & Wynne et al 1.

SOUTHWEST TEXAS

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	R.gs	Drg.	Ttl.
Luling	0	0	0	0	0	5	5
Mirando	33	7,145	1	10	25	49	74
Somerset	2	16	0	0	0	3	3
Rockdale-Minerva	4	55	0	0	1	6	7
Miscellaneous	4	5	2	1	15	51	66
Total June	43	7.221	3	11	41	114	155
Total May	31	6,475	6	7	33	102	135
Difference	12	746	3	4	8	12	20

WELLS COMPLETED
LULING
None.
MIRANDO

Edington, Associated Oil 3	200
Edington, G. M. Ball 2	200
———, Staley & Wynne 4	150
———, Staley & Wynne 5	150
———, Staley & Wynne 6	150
Aviator, G. M. Ball 1	600
Aviator, Gibson Oil 1	500
Edington, Three Rivers Oil 6	800
Car-Tex, Henne, Winch & F. 1	gas
Lopez, Associated Oil 1	gas
Cole, Cole Pet. 22	gas
Cole, Cole Pet. 6	700
Cole, Cole Pet. 24	40
Cole, Kisselman & Slocum 1	gas
Cole, O. W. Killiam 7	gas
Cin-Tex Pet. 1	500
Holbein, Kisselman & Stalbans 36	700
Weber, Andrews Pet. 1	abd
Bruni, Crown Central Pet. 9	400
Bruni, Crown Central 6-A	75
Cin-Tex, Barclay & Meadors 3	gas
Randado, Morgan O. & G. 1	gas
Randado, Houston-Gulf Gas 6	gas
Randado, Houston-Gulf Gas 7	250
Randado, Houston-Gulf Gas 8	250
Cin-Tex, Cin-Tex Oil 7	350
Randado, Simms Oil 4	200
Randado, Magnolia Pet. 4	200
Holbein, Kisselman & Stalbans 37	150
Weber, Kisselman & Stalbans 2	150
Holbein, Associated Oil 2	gas
Merchants, Magnolia Pet. 5	gas
Palacois, W. & P. Oil 3	30
Wells completed	33
Production	7145
Gas	10
Dry	1

SOMERSET

Hart, Grayburg Oil 20	8
Langley, Witherspoon Oil 7	8
Wells completed	2
Production	16

ROCKDALE-MINERVA

Coulter, Clear Lake Oil 11	20
Phillips, Texas Pet. 13	15
Sterlsky, Roy Anderson 2	10
Sterlsky, Union Pet. 4	10
Wells completed	4
Production	55

LULING
Wells Drilling
Kelly, United North and South Oil 1.
Tiller, United North and South Oil 1.
Moore, United North and South (wo) 17.
Baker, United North and South 35.
McKean, United North and South 23.
Wells drilling, 5.
MIRANDO
RANDADO FIELD
Rigs
Survey 291, Simms Oil 8, 9.
Palacios, Amn. Well Prospecting Co. 6, 7.
Wells Drilling
Cole, Simms Oil 2.
Lynecker, Simms Oil 1.
———, Wheelock & Collins 1.
Survey 291, Simms Oil 6, 7.
Block 11, Houston Gulf Gas 9, 10.
Block 11, W. F. Morgan 2.
Block 14, W. F. Morgan 3.
Palacios, Amn. Well Prospecting 4, 5.
Palacios, Hoard et al 1.
JIM HOGG COUNTY
Rigs
Mann, O. W. Killiam 2.
Allen, Simms Oil 2.
T. P. Holbein, K. & S. Co. 4.
Holbein, K. & S. Co. 38, 39, 40.
Wells Drilling
Holbein, M. E. Weber 1.
Yeager, Murchison & Fain 1.
Allen, National Oil 1.
Allen, Beneduum & Trees 1, 2, 3.
Allen, Oil Exchange Co. 1.
Jones, L. M. Holden 2.
WEBB COUNTY
Rigs
Edington, Strouble & Stroube 1, 2, 3.
Bruni, Stroube & Stroube 1.
Bruni, Staley et al 3, 4, 5, 6.
Bruni, J. C. Robinson 1.
Gracia, Crown Central Pet. 1.
Bruni, Crown Central Pet. 2-B.
Bruni, Crown Central Pet. 11, 12.
Cole dist, Barclay & Meadors 2.
Cole dist., Cole Pet. 9-A.
Wells Drilling
Benavides, Cole Pet. 25, 26.
Section 10, Houston Oil 3.
Rash, G. M. Ball 1.
———, Gibson Oil 5, 6, 7.
Bruni, Murchison & Fain 1.
Edington, Lucas-Kirkpatrick (sd) 2.
Survey 835, O. W. Killiam 1.
Bruni, Crown Central Pet. 10.
Bruni, Crown & Staley 6-A.
Bruni, Houston Gulf Gas 1.
Bruni, Sun Oil Co. 3.
Bruni, Ruthada Oil 2.
Bruni, Cole Pet. 7.
Puig, Edington & Niles 1.
Bruni, Trussell et al 1.
Aviators, Laredo Oil 11.
Sur, Layne et al 1.
Bruni, Ramsler et al.
Caroline-Tex, J. H. Winch 2.
Caroline-Tex, Houston Gulf Gas 3.
Webster, Associated Oil 2, 3.
Webster, Davalls and Best 1.
Webster, Burns & Maline 1.
———, Lane-Texas Oil 1.
Billings, W. C. Ritchison 1.
Rigs, 25; wells drilling, 49; total, 74.
SOMERSET
Wells Drilling
Smith, Helvetia Oil 10.
Weimers, Helvetia Oil 7.
McCain, Grayburg Oil 5.
Wells drilling 3.
ROCKDALE-MINERVA
Rigs
Kevil, Ellison Oil 1
Wells Drilling
Coulter, Clear Lake Oil 13.
Sterlsky, Union Prod. 5.
Branch, Jennings Oil 16.
Coulter, Bartlett Prod. 10.
Phillips, Texas Pet. Dev. 5.
Horton, Triangle Oil 4.
Rigs, 1; wells drilling, 6; total, 7.

EAST CENTRAL TEXAS

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	R.gs	Drg.	Ttl.
Navarro	2	1,775	0	0	0	5	5
Limestone	0	0	0	0	1	8	9
Miscellaneous	0	0	0	0	0	20	20
Total June	2	1,775	0	0	1	33	34
Total May	14	375	10	1	2	29	31
Difference	12	1,400	10	1	1	4	3

Wells Completed
NAVARRO COUNTY

McKie, Pure Oil Co. 68	175
Woolens, Garland Kent 1	1600
Wells completed	2
Production	1775

Rigs and Wells Drilling
Rigs
LIMESTONE COUNTY
Hargrave, Eisenmayer et al 1.
Wells Drilling
*Indicates shut down.
Southern Pine Lbr., Humble O. & R. 1.
ANDERSON COUNTY
CHEROKEE COUNTY
Ousley, Humphreys Corp 1.
Earle & Ragsdale, Humble O. & R. 1.
Clapp, Humphreys Corp. 2.
Hill, Nicolle et al 1.
Boling, Humphreys Corp. 1.
ELLIS COUNTY
Griffiths, Simms Oil 1.
Getzendanner, Magnolia Pet. 1.
FALLS COUNTY
Peacock, High Bank Oil Co. 1.
FREESTONE COUNTY
*Pickens, Kechi Petroleum 1.
GRIMES COUNTY
Freund, Newblock Oil 1.
HENDERSON COUNTY
Sterrett, Fred. Heine 1.
Martin, Evans et al 1.
HILL COUNTY
Rose, Johnston & Phelps 1.
Sanderson, Johnson & Phelps 1.
HOPKINS COUNTY
Brooks, Kelsey et al 1.
HUNT COUNTY
Barnett, Tullall & Kelsey 1.
KAUFMAN COUNTY
Williamson, J. D. Harper 1.
LIMESTONE COUNTY
*Richardson, Wells et al 1.
Baker, Eisenmayer et al 1.
*Ross, Transcontinental Oil 1.
Rossen, Transcontinental Oil 1.
*Ellis, J. K. Hughes 18.
Stockton, Pure Oil 2.
Curry, Patty Kosse 1.
*Feaner, Dillen & Hammond 1.
MILAM COUNTY
*Brown, Allen & Harper 1.
Esperson, The Texas Co. 1.
NAVARRO COUNTY
Mitchell, Osborne et al 1.
Fullwood, Farris et al 1.
Hillburn, Barclay & Meadows 5.
*McClelland, McDonald Bros.
*Longbotham, Snowden & McSweeney 13.
Rigs, 1; wells drilling, 33; total, 34.

GULF COAST FIELDS

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	R.gs	Drg.	Ttl.
Boling	16	5,715	7	0	9	13	22
Batson	7	129	0	0	0	3	3
Big Creek	1	75	0	0	0	4	4
Barber Hill	1	0	1	0	1	1	2
Blue Ridge	0	0	0	0	1	3	4
Dayton	0	0	0	0	0	3	3
Edgerly, (La.)	3	325	0	0	1	2	3
Goose Creek	6	1,170	2	0	3	12	15
Humble	3	75	0	0	1	6	7
Hull	13	2,290	3	0	7	19	26
High Island	1	0	1	0	0	5	5
Jennings (La.)	6	260	2	0	0	2	2
Markham	2	0	1	1	0	2	2
Lockport (La.)	2	5,500	0	0	2	6	8
Nash Dome	2	240	1	0	0	4	4
Orange	7	3,090	1	0	0	16	16
Pierce Junct.	2	500	1	0	2	3	5
Piedras Pintas	2	0	2	0	0	6	6
Spindletop	6	220	3	0	2	9	11
Saratoga	1	100	0	0	0	1	1
Sour Lake	4	1,510	1	0	1	10	11
South Liberty	1	0	1	0	0	3	3
Vinton (La.)	8	1,815	3	0	3	7	10
W. Columbia	1	0	1	0	0	1	1
Miscellaneous	11	0	10	1	16	62	78
Total June	106	23.014	41	2	49	204	253
Total May	102	33,291	41	3	63	209	272
Difference	4	10.277	0	1	14	5	19

WELLS COMPLETED
BOLING

Hooper, Vacuum Oil 3	2500
Hooper, Vacuum Oil 2	150
Hooper, Vacuum Oil 1	abd
Floyd, Oxford-Southern Expln 5	sw
Hawes, Humble-Gulf 3	50
Taylor, Sinclair Oil & Gas 4	sw
Taylor, Sun Co. 3, 4	sw
Hawes, Humble-Gulf 10	400
Hawes, Humble-Gulf 9	200
Woodbin, Houston Gulf Gas 1	abd
Bey, Jas Weed, 5	600
Taylor, Sinclair O. & G. 2 (wo)	175
Taylor, Sinclair Oil & Gas 5	abd
Hawes, Humble-Gulf 13	1500
Taylor, The Texas Co. 9	140
Mick, Humphrey Corp. 1	abd
Wells completed	16
Production	5715
Abd and saltwater	7

BATSON

State land, East Batson Oil 13	sw
Choate, Gulf Prod. 60	6
Wing, Gulf Prod. 103 (wo)	3
Wing, Gulf Prod. 38 (wo)	25
Wing, Gulf Prod. 148	50
Milhome, Buchanan Oil 88	20
Paraffine, Paraffine Oil 66	20
Wells completed	7
Production	129

BARBER HILL

Barber, Bennett Prod. 2	sw
Wells completed and saltwater	1

BIG CREEK

Davis, Gulf Prod. 28	75
Wells completed	1
Production	75

EDGERLY

Moore, Green Oil 7	175
Hunter, Rex Oil 2	50
Bright-Penn, Gulf Refg. 31	100
Wells completed	3
Production	325

GOOSE CREEK

Peninsula, Humble Oil & Ref. 22	sw
Hirsch, Gulf Prod. 5	930
Wright, Sun Co. 8	50
Galliard Fee, Gulf Prod. 12	150
Smith, Humble Oil & Refg. 67	abd
Bryan, L. G. Marshall 3	40
Wells completed	6
Production	1170
Abd and saltwater	2

HUMBLE

Bailey, H. & W. Oil 2	25
Bailey, Cardinal Oil 2	25
Wilson, Woods et al 7	25
Wells completed	3
Production	75

HULL

Scarborough, Gulf Prod. 17	200
Morris-Phillips, Gulf Prod. 22	50
Dolbear, Republic-Houston Oil 124	300
Dolbear, Republic-Houston Oil 127	150
Dolbear, Republic-Houston Oil 129	300
Taylor, Mecom Oil 2 (wo)	300
Barngrover, Empire Gas & Fuel 19	350
Palmer, Houston Prod. 6	abd
Phoenix, Gulf Prod. 11 (wo)	115
Hannah, The Texas Co. 1	sw
Dolbear, Republic Prod. 130	400
Merchant, The Texas Co. 10	sw
Hannah, Texas-Vacuum Oil 2	125
Wells completed	13
Production	2290
Abd and saltwater	3

HIGH ISLAND

McCarthy, Island Oil 1	abd
Wells completed and abd	1

JENNINGS

C. Z. A., Myers Oil 5	20
Jennings-Clement, Gulf Refg. 22 (wo)	15
Fee, Coastal Fuel Oil 91	25
Fentent, General Pet. 6	sw
Clement, Utropal Oil 1	sw
Jennings-Clement, Gulf Refg. 27	200
Wells completed	6
Production	260
Saltwater	2

MARKHAM

Kountz, Rycade Pet. 1	abd
Gray, Houston-Gulf Gas 3	gas
Wells completed	2
Gas	1
Abd	1

NASH DOME

Flessner, Rycade Pet. 2	abd
Flessner, Rycade Pet. 3	240
Wells completed	2
Production	240
Abd	1

XUM

ORANGE
Berwick, Orange Pet. 1 2500
Hager, Gulf Prod. 3 (wo) 200
Chesson, Orange Pet. 12 150
Williams, Orange Pet. 1 ..... abd
Chesson, Texhoma Oil 14 (wo) 150
State Land, Rycade Pet. 4-E (wo) 10
Peveto, Gulf Prod. 2 (wo) .....
McLean, Brownie Babbittee Oil 5 80

Wells completed 7
Production 3090
Abd 1

PIERCE JUNCTION
Howe, H. R. Cullen 2 (wo) 500
Settegast, Rio Bravo Oil 2-P. F. ..... sw

Wells completed 2
Production 500
Saltwater 1

PIEDRAS PINTAS
Walsh, Houston-Gulf Gas 1 ..... sw
Walsh, Humble Oil & Refg. 5 ..... sw

Wells completed and saltwater 2

SPINDLETOP
Gladys, Gulf Prod. 186 ..... sw
Garrick, O. Barbee 1 ..... sw
National, Unity Oil 45 80
Higgins, Wilson-Broach 49 40
Trembly, Porch & Trembly 4 100
Trembly, Seven Oil 1 ..... sw

Wells completed 6
Production 220
Saltwater 3

SARATOGA
Cotton, Rio Bravo Oil 4 100

Wells completed 1
Production 100

SOUR LAKE
Fee, Minor Oil 67½ 4
Rogers, Barclay Oil 3 6
Hardin, Lake View Oil 48 ..... sw
Jackson, Humphrey Corp. 1 1500

Wells completed 4
Production 1510
Saltwater 1

SOUTH LIBERTY
Duessen, Humble Oil & Refg. 1-B .... abd
Wells completed and abd 1

LOCKPORT
Farquhar, Vacuum-Gulf joint 3 2500
Miller, Vacuum-Gulf joint 9 3000

Wells completed 2
Production 5500

VINTON
Gray, The Texas Company 1-A ..... sw
Vincent, Edgerly Pet. 3 15
Gray, Marrs McLean 7 250
Star, Gulf Refg. 39 1500
Lyons, Wilson-Broach 7 30
Gray, The Texas Co. 15 20
Gray, Supreme Oil 1 ..... abd
Lyons, Pelican Oil 2 ..... sw

Wells completed 8
Production 1815
Abd 3

WEST COLUMBIA
Arnold, The Texas Co. 22 ..... abd

Wells completed and abd 1

MISCELLANEOUS
FORT BEND COUNTY
Long Point, Davis, Gulf Prod. 8 ..... abd
CHAMBERS COUNTY
Morris, Dunman et al 1 ..... abd
League, The Texas Co. 1 ..... abd
HARDIN COUNTY
Kountz, Weldon Oil 1 ..... abd
BRAZORIA COUNTY
Cooper, Roxana Pet. 1 ..... abd
JEFFERSON COUNTY
Thomas, Gulf Prod. 7 ..... abd
LIBERTY COUNTY
Pruitt, Poor Boy Oil 1 ..... abd
REFUGIO COUNTY
Shelly, Houston-Gulf Gas Co. 1 ..... gas
DUVAL COUNTY
Palangua dome, Schalbert, Humble O. & R. 4 ..... abd
NEWTON COUNTY
Tram, Humble Oil & Refg. 1 ..... abd
SOUTH LOUISIANA
IBERIA PARISH
Salt Mine, United Oil & Gas 1 ..... abd

Wells completed 11
Gas 1
Abandoned 10

RIGS AND WELLS DRILLING
BOLING
Rigs
Hawes, Vacuum-Gulf 8, 11, 14, 15, 16.
Taylor, Sinclair Oil & Gas 6.
Taylor, Sun Co. 6.
Farmer, Sun Co. 1.
Farmer, The Texas Co. 1.
Wells Drilling
Hawes, Humble-Gulf 5, 6, 7, 12.
Floyd, Oxford-Southern 3 (wo).
Taylor, Sun Co. 1 (wo) 11.
Taylor, The Texas Co. 5, 8.
Floyd, The Texas Co. 2, 3.
Felder, The Texas Co. 1.
Hooper, Vacuum Oil 1 dpng.
Rigs, 9; wells drilling, 13; total, 22.
BATSON
Wells Drilling
Hodges, Capitol Oil 5.
Choate, Gulf Prod. 61.
State Land, East Batson Oil 13.
Wells drilling, 3.
BARBER HILL
Rigs
Barber, Kirby Pet. 1.
Wells Drilling
Barber, Bennett Prod. 2, dpng.
Rigs, 1; wells drilling, 1; total, 2.
BLUE RIDGE
Rig
Robinson, Blue Ridge Oil & Gas 1.
Wells Drilling
West-Schenck, Abercrombie et al 1, dpng.
Blakely, Gulf Prod. 7-B.
Invincible, Gulf Prod. 3, dpng.
Rigs, 1; wells drilling, 3; total, 4.
BIG CREEK
Wells Drilling
Davis, Gulf Prod. 29.
Wheat, Gulf Prod. 11.
Long Point, Davis, Gulf Prod. 11, 12.
Wells drilling, 4.
DAYTON
Wells Drilling
Pruitt, Poor Boy Oil 2.
Schlender, Harrison Oil 2.
Liberty, Old Colony Oil 11.
Wells drilling, 3.
EDGERLY
Rig
Hill, W. B. Drysdale 2.
Wells Drilling
Hunter, Rex Oil 3.
Bright-Penn, Gulf Refg. 25, dpng.
Rigs, 1; wells drilling, 2; total, 3.
GOOSE CREEK
Peninsula, Humble Oil & Refg. 17.
Hirsch, Gulf Prod. 6.
Smith, Humble Oil & Refg. 70.
Wells Drilling
Smith, Humble Oil & Refg. 68, 69.
Gallard, Humble Oil & Refg. 22, dpng.
Wright, Sun Co. 6 (wo).
Bryan, Powell Oil 6, dpng.
Scorrgea, M. & B. Oil 4.
Gallard, Gulf Coast Oil 9, dpng.
Chapman-Bryan, Gulf Prod. 12.
Wright, Gulf Prod. 7.
Beaumont, Gulf Prod. 33.
Stateland, Gulf Prod. 8.
Smith, Gulf Prod. 18.
Rigs, 3; wells drilling, 12; total, 15.
HUMBLE
Rigs
River, Sun Co. 34.
Wells Drilling
River, Sun Co. 33.
Perkins, Brane Oil 5.
Bailey, H. & W. Oil 2.
Burt, Barclay & Meadors 5.
West, Cahill & Co. 1.
———, Fondren et al 5.
Rigs, 1; wells drilling, 6; total, 7.
HULL
Rigs
Dolbear, Republic-Houston Oil 132, 133.
Guedry, Humble Oil & Refg. 21.
Merchant, Humble Oil & Refg. 5.
Barngrover, Empire Gas & Fuel 20, 21.
Phoenix, Gulf Prod. 70.
Wells Drilling
Dolbear, Republic-Houston Oil 126, 128, 131.
Guedry, Humble Oil & Refg. 6 (wo) 23.
Bevers, Humble Oil & Refg. 1.
Lynd, Humble Oil & Refg. 1.
Taylor, Mecom Oil 9.
Merchant, The Texas Co. 10, dpng.
Hannah, The Texas Co. 1, sd.
Hannah Fee, The Texas Co. 1.
Scarborough, Gulf Prod. 18.
J. C. Baldwin, Gulf Prod. 18.
Phoenix, Gulf Prod. 68, 69, 17 (wo) 19 (wo).
Hannah Fee, Gulf Prod. 18.
Thomas, Gulf Prod. 9.
Rigs, 7; wells drilling, 19; total, 26.
HIGH ISLAND
Wells Drilling
Cade, The Sun Co. 8-C, 10.
Smith, Gulf Prod. 2-A, 5.
Jackson, Paggui Oil 1.
Wells drilling, 5.
JENNINGS
Latrielle, The Texas Co. 103 sd.
Jennings-Clement, Gulf Refg. 30, dpng.
Wells drilling, 2.
LOCKPORT
Rigs
Miller, Vacuum-Gulf 12.
Bordages, Vacuum-Gulf 3.
Wells Drilling
Miller, Vacuum-Gulf 7, 8, 10, 11.
Freidberg & Wolf, Vacuum-Gulf 1, dpng.
Lock-Moore, Vacuum-Gulf 4.
Rigs, 2; wells drilling, 6; total, 8.
MARKHAM
Wells Drilling
Kountz, Rycade Pet. 2.
Gray, Houston-Gulf Gas 4.
Wells drilling, 2.
NASH DOME
Wells Drilling
Wisdom, Rycade Pet. 7, 8.
Nash, Rycade Pet. 8, 9.
Wells drilling, 4.
ORANGE
Wells Drilling
Briggs-Moore, Gulf Prod. 2.
Winifree, Gulf Prod. 6.
Haser Fee, Gulf Prod. 4, 23.
Kishi-Lang, Gulf Prod. 11-A.
McLean, Brownie Babbittee Oil 2, dpng.
Carbello, Rex Pet. 4.
Chesson, Humble Oil & Refg. 25-A.
McGuire, Kishi Dev. 7, dpng.
Winifree, Orange Pet. 3.
Cow bayou, Rycade Pet. 5-B, 10.
Jackson, Supreme Oil 1, dpng.
Chesson, Texhoma Oil 6, 9, 14.
Wells drilling, 16.
PIEDRAS PINTAS
Wells Drilling
Walsh, Humble Oil & Refg. 5 (wo) 6.
Speer, Magnolia Pet. 1, sd.
Palanagana, Schallbert, Simms Oil 1.
Palanagana, Singer, Humble Oil & Refg. 9.
Palanagana, Schallbert, Humble O. & Rfg. 5.
Wells drilling, 6.
PIERCE JUNCTION
Rigs
Settegast, Rio Bravo Oil 3.
Dooley, Texas Exploration 10.
Wells Drilling
Cain, Navarro Oil 3.
Taylor, Gulf Prod. 11, 18.
Rigs, 2; wells drilling, 3; total, 5.
SPINDLETOP
Rigs
Gordon, Paggi & Co. 1.
T. N. O., Rio Bravo Oil 1.
Wells Drilling
Weed, Sun Co. 1.
McFadden, Yount-Lee Oil 6.
Gladys, Yount-Lee Oil 5.
Davis, Yount-Lee Oil 1.
Gladys, Brown Williams 1, sd.
Quinn, Hines et al 1.
Trembly, Seven Oil 1, dpng.
Garrick, O. Barbee 1.
Weed, Gulf Prod. 1-A.
Rigs, 2; wells drilling, 9; total, 11.
SARATOGA
Wells Drilling
Fountain, Rio Bravo Oil 5.
Cotton, Rio Bravo Oil 5.
Wells drilling, 2.
SOUR LAKE
Rigs
McLean, Gulf Prod. 1-D.
Wells Drilling
Gilbert, Yount-Lee Oil 4.
Lynn, Yount-Lee Oil 1.
Bashara, Humphrey Corp. 1-B, 2.
Hardin, Lake View Oil 48.
Lynn, Sun Co. 1.
Libbie, Sun Oil Co. 1.
Bashara, Gulf Prod. 1.
Jackson, Falloure et al 3.
Merchant, Orange Pet. 1.
Rigs, 1; wells drilling, 10; total, 11.
SOUTH LIBERTY
Wells Drilling
Welder, Humble Oil & Refg. 2.
Lecoure, Coastal Oil 1, sd.
Mitchell, Premium Oil 1.
Wells drilling, 3.
VINTON
Rigs
Vincent, Gulf Refg. 42.
Gray, Gulf Refg. 5.
Vincent, Vinton Pet. 17.
Wells Drilling
G. N. G., Gulf Refg. 42, dpng.
Rescue, Vinton Pet. 20.
Gray, Vinton Pet. 28.
Harmony, Vinton Pet. 15.
Vincent, Edgerly Pet. 10.
Gray, Marrs McLean 11.
Johnson, Vinton Oil Syndicate 2.
Rigs, 3; wells drilling 7; total, 10.
WEST COLUMBIA
Wells Drilling
Abrams, Humble Oil & Refg. 4.
Wells drilling, 1.

N. LOUISIANA-ARKANSAS

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Rrg.	Ttl.
Union	76	5,761	9	2	45	71	116
Ouachita	10	85	3	3	7	18	25
Columbia	4	42	1	0	2	3	5
Nevada	4	0	2	1	2	4	6
Miscellaneous	2	150	1	0	5	8	13
Total June	95	6,038	16	6	61	104	165
Total May	133	13,707	13	6	36	128	164
Difference	38	7,669	3	0	25	24	1

LOUISIANA

Summary of Field Operations

Parish—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Bossier	3	0	2	1	3	6	9
Caddo	25	937	3	2	12	40	52
Caldwell	0	0	0	0	1	4	5
Claiborne	0	0	0	0	0	4	4
DeSoto	3	200	2	0	0	4	4
Grant	6	0	6	0	2	3	5
Monroe district	11	0	2	9	4	15	19
Webster	3	80	1	0	3	8	11
Winn	1	400	0	0	2	4	6
La Salle	41	4,345	11	0	20	35	55
Miscellaneous	3	0	3	0	3	6	9
Total June	96	5,962	30	12	50	129	179
Total May	104	17,569	17	9	47	134	181
Difference	18	11,607	13	3	3	5	2

ARKANSAS

UNION COUNTY
COMPLETIONS

4-17-16 Harrell, Magnolia Pet. Co. 1 .. 480
4-17-16 Murphy, Allday Drlg. Co. 1 .. 75
16-17-16 Andress, Atlantic Oil Prod. Co. B-3 30
16-17-16 Graham, Atlantic Oil Prod. Co. 2 20
4-17-16 Kilgoe, Bond & Evans 3 25
16-17-16 Goodwin, Humble O. & R. 2 .. 150
21-17-16 Primm, Imperial O. & G. 2 ... 72
17-17-16 White, Long et al 2 ..... gas
9-17-16 Slaughter, Magnolia Pet. 8 ... 150
9-17-16 Slaughter, Magnolia Pet. 9 ... 150
16-17-16 Andress, Natural G. & F. Corp. 5 60
4-17-16 Willett, Natural G. & F. Corp. 1 300
21-17-16 Goodwin, Ohio Oil 2 45
4-17-16 Slaughter, Owens et al 5 225
4-17-16 Slaughter, Pure Oil Co. 2 30
4-17-16 Slaughter, Pure Oil Co. 3 400
9-17-16 Dumas, Pure Oil Co. 4 45
16-17-16 Graham, Rovenger Oil Corp. 3 45
16-17-16 Perry, Simms Oil Co. 4 30
2-16-15 Alphine, Gulf Refg. Co. 17 ... 150
14-16-15 Clawson, Gulf Refg. Co. 2 ... 180
6-16-15 McClanahan, Imperial O. & G. Co. 8 20
2-19-18 Edwards, Moorefield et al 1 .. dry
9-16-15 Palmer, Peer Oil Co. 5 125
6-16-15 Flannigan, Sinclair O. & G. Co. 8 100
16-17-16 Andress, Atlantic Oil Prod. Co. B-8 30
10-17-16 Dumas, Coats & Sowell 2 abn. loc
16-17-16 Goodwin, Humble O. & R. Co. 3 175
16-17-16 Goodwin, Humble O. & R. Co. 6 125
10-17-16 Slaughter, Humble O. & R. Co. 3 35
15-17-16 Harrell, Keisker et al 1 15
9-17-16 Dumas, Magnolia Pet. Co. 6 ... 100
4-17-16 Harrell, Magnolia Pet. Co. 2 .. 100
4-17-16 Willett, Natural G. & F. Corp. 2 200
21-17-16 Goodwin, Ohio Oil Co. 3 20
4-17-16 Harrell, Pure Oil Co. 1-A ... 200
16-17-16 Goodwin, Rovenger Oil Corp. B-2 50
9-17-16 Slaughter, Wingfield et al A-4 35
17-17-16 Mitchell, Lion O. & R. Co. A-9 60
20-17-16 Mitchell, J. P. Kelly 1 10
8-16-15 Murphy, Broderick & Calvert B-7 ..... gas
15-16-15 Murphy, Simms Oil Co. A-2 .. 62
17-16-15 Carey, Natural G. & F. Corp. 1 dry
7-16-15 Hatfield, Magnolia Pet. Co. 6 abn
8-16-16 Childs, Magnolia Pet. Co. 1 .. 70
10-16-15 Foenniken, Lion O. & R. Co. 8 100
23-17-16 Ennis, Hatfield et al 2 ..... dry
28-16-16 Parks, Gaughan & Sifford 1 ... dry
30-19-14 Ford, Garrett et al 1 ..... dry
4-17-16 Harrell, Pure Oil Co. 1 200
15-17-16 Harrell, Rovenger Oil Corp 2 .. 20
3-17-16 Slaughter, Southern C. O. P. Co. 2 37
4-17-16 Murphy, H. L. Hunt 1 12
9-17-16 Slaughter, Miller & Cottingham 6 75
9-17-16 Slaughter, Magnolia Pet. Co. 6 100
10-16-15 Lawton, Sunny Jim Oil Co. A-7 60
7-16-15 Tatum, Sam Cook 8 20
17-16-15 Smith, Leo P. Pukrul 2 ..... dry
25-18-16 Coombs, Lion O. & R. Co. 1 ... dry
7-16-15 Tatum, Magnolia Pet. Co. 4 ... dry
16-17-16 Andress, Atlantic Oil Prod. Co. B-4 30
16-17-16 Andress, Atlantic Oil Prod. Co. B-5 60
16-17-16 Andress, Atlantic Oil Prod. Co. B-6 40
16-17-16 Goodwin, Atlantic Oil Prod. Co. 8 60
16-17-16 Goodwin, Humble O. & R. Co. 5 30
9-17-16 Dumas, Magnolia Pet. Co. 5 ... 70
9-17-16 Slaughter, Magnolia Pet. Co. 7 50
4-17-16 Slaughter, Pure Oil Co. 4 80
22-17-16 Mooty, Reynolds & Marr 1 25
16-17-16 Goodwin, Rovenger Oil Corp. A-5 75
4-17-16 Flournoy, Roxana Pet. Corp. 5 115
16-17-16 Perry, Simms Oil Co. 5 20
16-17-16 Perry, Simms Oil Co. 6 20
16-17-16 Perry, Simms Oil Co. 7 18
9-17-16 Slaughter, Wingfield et al A-3 25
15-16-15 Murphy, Eason et al 8 90
15-17-16 Mooty, Foster & McWilliams 2 35

Completions 76
Production 5761
Dry 9
Gas 2

OUACHITA COUNTY

31-15-19 Hall, El Dorado Union Oil 1 ... 10
17-12-17 Moline, H. M. Harrell 2 ..... dry
21-15-19 Dalton, S. S. Hunter 1 ..... dry
2-14-18 Ratch & Cartier, J. D. Reynolds 1 ..... dry
30-15-16 Murphy, Magnolia Pet. Co. 2 .. 40
27-15-16 Neeley, The Texas Company 7 20
28-15-15 Hilderbrant, Simms Oil Co. 11 gas
31-15-19 Watson, Magnolia Pet. 2 15
4-16-15 Hays, Marine Oil 8 ..... gas
4-16-15 Umsted, Woodley Pet. 8 ..... gas

Completions 10
Production 85
Dry 3

COLUMBIA COUNTY

36-15-20 Jones, Gorden et al 3 15
36-15-20 Jones-Womack, J. E. Crosbie 3 dry
36-15-20 Jones, Gorden et al 2 15
36-15-20 Jones, Gorden et al 1 12

Completions 4
Production 42
Dry 1

NEVADA COUNTY

10-14-21 Womack, Zing et al 4 ..... dry
27-13-21 Whitehead, W. F. Furen et al 1 dry
9-15-22 Groves, Humble O. & R. C-1 .. gas
WILDCATS
18-19-24 Allen, Arkansas Fuel Oil 3 ... 150
25-15-26 Dale, Lenze et al 1 ..... dry

Completions 2
Dry 1
Production 150

UNION COUNTY
Wells Drilling

4-17-16 Murphy, Allday Drlg. Co. 3, 2.
4-16-15 Calloway, Amerada Pet. Corp. 7.
16-17-16 Andress, Atlantic Oil Prod. B-7.
16-17-16 Goodwin, Atlantic Oil Prod. 4.
1-16-16 McDonald, F. A. Book 1.
8-16-15 Murphy, Broderick & Calvert B-5.
8-16-16 Fee, G. J. Childs 3.
6-18-15 Robinson, Clark & Greer 3.
34-17-15 Telford, Crestline Oil Co. 1.
22-17-16 Mooty, Eason et al 1.
15-16-15 Murphy, Eason et al 9.
15-16-15 Murphy, Federal Pet. Co. 3.
6-18-14 Alphin, Grimes & Jones 1.
9-16-15 Murphy, Gulf Refg. Co. 21.
21-17-16 Primm, Gulf Refg. Co. 1.
8-18-15 Fitzgerald, F. C. Henderson 2.
8-18-15 Pratt, F. C. Henderson 2.
3-16-15 Graves, Hickman et al 7.
11-16-15 Giller, Hollayfield & McFarland 10, 13.
9-16-15 Flenniken, Humble O. & R. B-6.
7-16-15 Lawton, Humble O. & R. B-2.
27-16-16 Swilley, H. L. Hunt 2, 3, 4.
4-17-16 Murphy, H. L. Hunt 5.
3-17-16 Slaughter, Hickman et al 1.
26-17-16 Goodwin, Imperial O. & G. 1.
19-16-16 Foster, E. M. Jones 1.
27-19-16 McDonald, Jones & Murphy 1.
3-16-15 Williams, Kennebrew et al 7.
10-17-16 Dumas, Lion O. & R. Co. A-2.
17-17-16 Mitchell, Lion O. & R. Co. A-8.
7-16-15 Tatum, Magnolia Pet. 5.
4-17-16 Harrell, Magnolia Pet. 3, 4, 5.
9-17-16 Dumas, Magnolia Pet. 2.
10-16-15 Lawton, Mazda Oil Corp. R-6.
11-17-16 Haney, McGaha et al 1.
4-16-15 Hays, Murdock et al 8.
17-16-15 Vestal, Murdock et al 1, 7.
4-16-15 Willett, Natural G. & F. Corp. 3, 4.
14-16-15 Ballard, Ohio Oil Co. 3.
21-17-16 Goodwin, Ohio Oil 4, 5.
9-16-15 Palmer, Peer Oil 6.
4-17-16 Harrell, Pure Oil N-1, N-2.
27-16-16 Fee, A. H. Ramage 1.
10-16-15 Lawton, A. H. Ramage C-6.
21-17-16 Goodwin, Reynolds & Marr 2.
15-17-16 Harrell, Rovenger Oil Corp. 3.
4-17-16 Flournoy, Roxana Pet. Corp. 6.
9-16-16 Saxon, C. L. Saxon B-1.
15-16-15 Murphy, Simms Oil 3.
16-17-16 Perry, Simms Oil 8.
8-16-16 Rumph, Southern Crude Oil Purchasing Co. 1.
3-17-16 Slaughter, Southern Crude Oil Purchasing Co. 3.
15-16-15 Wells, Southern Crude Oil Purchasing Co. A-4.
6-16-15 McClanahan, Standard Oil 11.
8-18-15 Brown, Sun Oil 9.
15-16-15 Murphy, Sure Oil Co. 5.
17-17-16 Jackson, Summerfield et al 1.
4-16-16 McElroy, Weiss & Simmons 1.
16-16-14 Goodwin, Williams et al 3.
10-17-17 Galligher, Wingfield et al 1.
3-17-16 Slaughter, Wingfield et al B-1, B-2.
Rigs
1-16-17 LaGrone, Arkansas Fuel Oil 8.
16-17-16 Goodwin, Atlantic Oil Prod. 2, 3, 4, 6, 7.
3-18-15 Prothro, Grimes & Jones 1.
5-16-15 Hardy-Murphy, Gulf Refg. 38.
16-17-16 Goodwin, Humble O. & R. 4, 7, 8.
27-16-16 Hammond, H. L. Hunt 1.
21-17-16 Primm, Imperial O. & G. 3.
10-16-15 Lawton, E. M. Jones 2-A.
17-16-15 Murphy, E. M. Jones 6.
27-19-14 Union Saw Mill, Jones & Murphy 1.
15-17-16 Harrell, Keisker et al 2.
17-17-16 Mitchell, Lion O. & R. A-12, C-1.
7-16-15 Tatum, Magnolia Pet. 6.
8-16-16 Childs, Magnolia Pet. 2.
4-17-16 Harrell, Magnolia Pet. 6.
12-16-17 Scott, Magnolia Pet. 2.
8-17-16 Slaughter, Magnolia Pet. 1.
5-16-15 Flenniken, Moco Oil Corp. 7, 9, 11.
4-17-16 Willett, Natural G. & F. Corp. 5, 6, 7.
21-17-16 Goodwin, Ohio Oil 6.
4-17-16 Harrell, Pure Oil 3-M.

21-17-16 Goodwin, Reynolds & Marr 1.
14-16-15 Murphy, Sam Richardson M-2.
9-17-16 Dumas, Rovenger Oil Corp. 3, 7.
16-17-16 Goodwin, Rovenger Oil Corp. 6, 7, 8, B-3, B-4.
16-17-16 Graham, Rovenger Oil Corp. 4.
9-18-13 Simmons, Simms Oil 1.
3-17-16 Slaughter, Southern Crude Oil Purchasing Co. 4.

Shut Down

20-17-15 Rogers, Arkansas Drlg. Co. 1.
8-18-12 Garner, Bonderant et al 1.
9-18-17 Primm, Calgo et al 1.
34-16-16 Mathews, W. H. Harper, trustee 1.
34-19-11 Townes, Kampeter et al 1.
Wells drilling, 71; rigs, 45; shut down, 5.

OUACHITA COUNTY

Rigs

21-14-17 Reynolds, Grayson, trustee 1.
33-15-15 Umsted, Gulf Refg. A-19.
9-12-17 Moline, Humble O. & R. 3.
28-15-15 Hildebrant, Humble O. & R. 10.
15-14-18 Howell, J. D. Reynolds 1.
36-13-18 Ratch & Cartier, J. D. Reynolds 2.
22-15-19 Davis, Arco Oil 1.

Wells Drilling

26-15-16 Arnold, Humble O. & R. B-11.
6-16-15 McClanahan, Imperial O. & G. 4.
32-15-15 Rhoten, Magnolia Petroleum B-4.
35-15-17 Clawson, A. Meek, trustee 1.
29-15-15 Goodwin, Ohio Oil 8.
27-15-16 Mullen, Ohio Oil 14.
9-14-17 Tate, Phillips Pet. 1.
28-15-15 Berg, Roxana Pet. Corp. 6.
29-15-15 Murphy, Simms Oil 6.
36-15-17 Shirey, Smith Drlg. Co. B-3.
29-15-15 Murphy, Standard Oil 9.
27-15-16 Hardin, Sun Oil Co. 6.
32-15-15 Berry, The Texas Company 17.
33-15-15 Umsted, Unity Pet. 6.
22-15-19 Morgan, Buffalo Oil 4.
25-15-19 Green, Louisiana O. & R. Corp. 2.
31-15-19 Watson, Magnolia Pet. 3.
22-15-19 Davis, J. D. Reynolds A-1.

Shut Down

32-15-15 Bennett, Roxana Pet. Corp. A-4.
27-15-16 Hicks, Sunny Jim Oil 1.
22-14-17 Yarbrough, Vandiver et al 1.
15-15-19 Holton et al 1.
Rigs, 7; wells drilling, 22; total, 29.

COLUMBIA COUNTY

Rigs

15-17-22 Gantt, Maier et al 1.
20-18-22 Dickens, Pluto Oil 1.

Wells Drilling

1-16-20 Jones, Gorden et al 4.
18-19-19 Wingfield, Haynesville Trust Co. 1.
29-19-20 Peter Doss, Ky.-Ark. Pet. 1.

Shut Down

13-15-20 Brown, R. W. Aarnes 2.
6-18-20 Davis, Scott Phillips 2.
Rigs, 2; wells drilling, 5; total, 7.

NEVADA COUNTY

Rigs

2-14-21 Water, Humble O. & R. 1.
2-14-21 Groves, W. F. Furen et al 1.

Wells Drilling

10-14-21 Womack, Autrey Oil 3.
10-14-21 Bodcau, Humble O. & R. 4.
1-14-21 Haynie, Webb et al 1.
27-13-20 Blakely, Zing et al 1.
Rigs, 2; wells drilling, 4; total, 6.

SCATTERED WILDCATS

Rigs

33-15-11 Arkansas, Magnolia Pet. 1.
31-10-10 Hall, Kingland Oil 1.
17-11-25w Nichols, Frank S. Meyers 2.
18-19-24 Allen, Arkansas Fuel Oil 4.
14-17-24 Colvin, The Texas Company 1.

Wells Drilling

7-17-15 Fee, Pine Prairie Oil 1.
1-16-14 Calion, Southern Crude Oil Purchasing Co. 1.
35-13- 5 Olga, McClintock & Goodka 1.
18-19-24 Red River, Arkansas Fuel Oil 1.
8-18-24 Frazier, Bostic Drlg. Co. 1.
10-19-24 Red River, Gulf Refg. E-1.
4-13-31 Waldrep, Greason et al 1.
10-11-31 Hawkins, Mellick Oil 1.

Shut Down

12- 9-20 Arnold, Virgil Heath, trustee 1.
35-10-20 Brown, Wheelen Oil 1.
29- 9-10 Moore, Haley et al 1.
7- 3-10 Hinsley, Decem Oil 1.
7-19-24 Red River, Arkansas Fuel Oil 3.
Rigs, 5; wells drilling, 13; total, 18.

LOUISIANA COMPLETIONS

URANIA

18-10-2e Urania, Natural Gas & Fuel Corp. B-6 150
16-10-2e Urania, Ohio Oil Co. 7 100
8-10-2e Hardtner-Tannehill, Degman and Youngblood 1 ..... dry
8-10-2e Urania, Hardtner Oil Co. 4 ... 200
22-10-2e Hardtner, H. R. Smith 1 ..... dry
25-10-1e King, J. S. Ambercrombie & Co. 7 1000
25-10-1e King, J .S. Ambercrombie & Co. 15 45
36-10-1e Tannehill, Arizola Pet. Co. 6 45
26-10-1e Holmes, Bailey et al. 1 50
7-10-2e Urania, Carter and Hurley 1.. dry
25-10-1e Bass, O. W. Clark 2 50
25-10-1e King, J. Q. Graves 1 10
7-10-2e Urania, A .E. Hudson 1 ..... abd
26-10-1e Tullos heirs, H. L. Hunt 10... 40
25-10-1e Tremont, Louisiana Oil & Refining Corp. B-32 200
18-10-2e Urania, Natural Gas & Fuel Corp. B-7 50
18-10-2e Urania, Natural Gas & Fuel Corp. B-8 75
18-10-2e Urania, Natural Gas & Fuel Corp. B-9 ..... dry
24-10-1e Urania, Ohio Oil Co. 3 5
26-10-1e Fee, L. E. Ozley 2 60
8-10-2e Urania, Shreveport Oil Corp. 1 dry
36-10-1e King, O. F. Whittaker 4 50
26-10-1e Herbert, Williams Drlg. Co. 5 30
31-11-2e Ayers et al 1 Miller ..... dry
19-11-3e Louisiana Central, Cherokee Petroleum Co. 2 ..... dry
25-10-1e Tremont, Louisiana Oil & Refg. Corp. B-19 ..... jkd
18-10-2e Urania, Natural Gas & Fuel Corp. E-7 ..... dry
24-10-1e Urania, Dixie Oil Co. 6 300
26-10-1e Tullos heirs, Hunt et al 12.... 40
26-10-1e Tullos heirs, Hunt et al 13... 100
35-10-1e Tremont, Louisiana Oil & Refg. Corp. A-8 150
25-10-1e Zimmerman, Love et al 4..... 500
36-10-1e Tannehill, Arizola Pet. Co. 8 100
19-10-2e Urania, Keen & Wolff 4 ..... dry
4- 9-2e Tremont, Louisiana Oil & Refg. Corp. A-7 ..... dry
18-10-2e Urania, Natural Gas & Fuel Corp. E-3 200
24-10-1e Urania, Natural Gas & Fuel Corp. F-1 200
30-10-2e Tremont, Louisiana Oil & Refg. Corp. B-4 200
11- 9-1e Zenoria, Montague Oil Co. 1.. 150
25-10-1e Russell, Sherman et al 3 ... 120
25-10-1e W. O. W., Youngblood et al 1 abd
36-10-1e Tannehill, Arizola Pet. Co. 7 50
26-10-1e Volk, Hamilton & Musick 2.. 75
26-10-1e Harper, O. W. Clark trustee, 3 400

Wells completed 41
Production 4745
Dry 11

BOSSIER PARISH

23-19-11 Smith, Autrey et al C-2 ..... gas
13-20-12 Weaver & Rivers, No-Bo Fuel Syndicate 1 ..... dry
17-18-11 Hale & Rumbough, Square Deal Oil Co. 1 ..... dry

Wells completed 3
Gas 1
Dry 2
Gas production 500,000

CADDO PARISH

15-21-15 Raines, Texas Co. 18 5
17-21-14 Sellington, Gilliam Synd. 1 ... 5
14-21-15 Robertshaw, Dixie Oil Co. 76.. 12
12-21-15 Smith, Ohio Oil Co. 18 ..... gas
7-20-15 Muslow, Dixie Oil Co., 16.... 50
15-21-16 Burglass, Galloway et al 1.... 60
15-20-16 Ferry Lake, Gulf Refg. 234... 14
16-20-16 Ferry Lake, Gulf Refg. 236 ... 75
22-21-15 Raines, Magnolia Pet. Co. 22 30
24-22-15 Files & Shanks, R. B. Nelson 2 25
13-21-15 Lane, Gulf Refg. Co. 17 15
24-21-15 Hardeman, H. J. Bussa 1 ... jkd
34-21-16 State, W. D. Chew 3 45
22-21-15 Raines, Lewis Oil Corp. 14.... 7
5-20-15 Don Thigpen, Magnolia Pet. Co. 15 ..... dry
10-20-16 Satterwhite, Oil City Oil Co., 2 ..... dry
23-22-15 Caddo L. B., S. L. Ricketts 12 20
33-21-16 Mason Fee, Texas Co. 4 35
14-21-15 Huckaby, Tholl Oil Co. 8 90
13-20-15 Youree-Randolph, D. C. Richardson 13 240
16-20-16 Ferry Lake, Gulf Refg. 233... 54
15-20-16 Ferry Lake, Gulf Refg. 235 ... 70
24-22-15 Files & Shanks, R. B. Nelson 1 30
14-21-15 Herold, The Texas Co. 7 55
25-16-12 Knight, Woodley Pet. Co. 2... gas

Wells completed 25
Production 937
Dry 3
Gas 2
Gas production 50,000,000

DE SOTO PARISH

29-12-11 Matthews, A. H. Tarvers B-1 200
18-12-12 Heard, L. V. Ulrey 1 ..... dry
34-12-11 Cody, Ohio Oil Co. 1..... dry

Wells completed 3
Production 200
Dry 2

GRANT PARISH

18- 9-1e Swope, Gulf Refg. Co. 1 ..... dry
3- 9-1w L. & A., Humble Oil & Refg. Co. 2 ..... dry
6- 9-1w L. & A., Humble Oil & Refg. Co. 4 ..... dry
8- 9-2w L. & A., Humble Oil & Refg. Co. 6-A ..... dry
13- 8-1w Ball & Cody, Finn et al 5 .... dry
3- 9-2w L. & A., Humble Oil & Refg. Co. ..... dry

Wells completed 6
Dry 6

MONROE DISTRICT

17-18-4e Nolan, Pioneer Oil & Gas Co. 1 gas
17-18-4e Ouachita, G. E. Jordan 1 ..... gas
1-18-4e Edwards, J. M. Huber, Inc., 2 gas
24-19-4e Fee, Palmer Corp. 3 ..... gas
24-20-4e Wilson, United Carbon Co. 2.. gas
6-19-5e McKenzie, McKenzie et al 1... gas
32-19-3e D'Arbone, Sam D. Hunter 1... gas
35-19-4e Fee, Southern Carbon Co. 48 gas
36-20-4e Millsap, Palmer Corp. 1 ..... gas
27-28-5e Crossett, Natural Gas Products Co. 18 ..... jkd
22-40-4e Archer, Feazell, trustee 1 ... jkd

Wells completed 11
Gas 9
Dry 2
Gas production 76,884,000

WEBSTER PARISH

8-20- 9 Bible, Magnolia Pet. Co. 1...jkd
21-21-10 Turner, Magnolia Pet. Co. 1... 50
21-21-10 Crichton, Louisiana Oil & Refg. Corp. 4 30

Wells completed 3
Production 80
Dry 1

SCATTERED WILDCATS

24-12-11 Hollingworth, Carnahan & Kyle 1 ..... dry
8-14-3w Rodgers, El Dorado Chief Oil Co. 1 ..... dry
24- 5-9w Peavy-Wilson, John B. Greer 1 ..... dry

Wells completed 3
Dry 2

BOSSIER PARISH

Wells Drilling

14-23-14 Murray, Arkansas Fuel Oil Co. 1.
15-19-11 Connell, Autrey Oil Co. 3.
9-20-13 Bulkley, Benton Synd. 1.
9-22-11 Bollinger, Doem et al 1.
13-19-11 Moon, The Texas Co. 1.
14-23-12 L. & A., Woodley & Collins 1.

Rigs

15-19-11 Connell, Autrey Oil Co. 4.
17-18-11 Burckhalter, Henderson et al 1.
4-21-11 Antria, Woodley & Collins 1.

Shut Down

14-19-11 Larkin, R. L. Crook 4.
23-19-11 Strange, Olmstead et al 10.
Rigs, 3; wells drilling, 8; total 11.

CADDO PARISH

Wells Drilling

34-21-16 State, W. D. Chew 4.
9-20-16 Caddo L. B., W. D. Chew A-1.
33-21-16 Fee, W. D. Chew 4.
27-22-15 Jolly, Dixie Oil Co. 1.
14-21-15 Robertshaw, Dixie Oil Co. 71, 77.
24-22-15 Hobbs, Dixie Oil Co. 6.
20-21-15 Cummings, Gilliam Synd. 1.
2-19-14 Byrd, Gulf Refg. Co. 1.
16-20-16 Ferry Lake, Gulf Refg. Co. 237, 242.
21-20-16 Ferry Lake, Gulf Refg. Co. 238.
22-20-16 Ferry Lake, Gulf Refg. Co. 239.
21-20-16 Ferry Lake, Gulf Refg. Co. 240, 241, 243.
35-21-15 Muslow, Gulf Refg. Co. E-1.
14-21-15 Tyson, Gulf Refg. Co. 12.
22-21-15 Raines, Lewis Oil Corp. 15.
24-21-15 Dillon, Magnolia Pet. Co. 16, 17.
29-21-15 Spell, Magnolia Pet. Co. 1.
24-21-15 Bradford, Magnolia Pet. Co. 1.
14-21-15 Murray, McGoldrick et al 9.
13-20-15 Youree-Randolph, Murphy & Jones 1.
1-21-15 Ardis, Ohio Oil Co. 1
13-20-15 Youree, Standard Oil Co. 1.
23-21-15 C. M. L. Co., Texas Co. 42.
33-21-16 Caddo L. B., Texas Co. 62.
14-21-16 Caddo L. B., Texas Co. 63.
15-20-16 F. J. Bayou, Texas Co. B-1.
16-20-16 F. J. Bayou, Texas Co. B-2.
33-21-16 Fee, Texas Co. 4.
2-21-16 Harrell, Texas Co. 53.
21-21-15 Hicks & Payne, Texas Co. 4.
28-21-15 Hobbs, Texas Co. A-7.
21-21-15 Hobbs, Texas Co. B-3.
23-21-15 Bashara,Tholl Oil Co. 10.
14-21-15 Huckaby, Tholl Co. 9.
35-16-12 Knight, Woodley Pet. Co. 3.

Rigs

2-20-16 Dambley, H. P. Burford 1.
16-20-16 Ferry Lake, Gulf Refg. Co. 244, 249.
22-20-16 Ferry Lake, Gulf Refg. Co. 245.
15-20-16 Ferry Lake, Gulf Refg. Co. 246, 247, 248.
15-21-15 Vespy, Lewis Oil Corp. 7.
18-17-16 Waterman, Magnolia Pet. Co. 1.
32-21-15 Muslow, Ramsey et al 1.
23-22-15 Allen, Standish Oil & Refg. Co. 7.
15-20-15 Hunsicker, Victor Wenzel, 1.

Shut Down

15-17-14 Cunningham, Manie Drilling Co. 1.
29-21-15 Hobbs, Page & Caldwell 1.
23-21-15 C. M. L. Co., Texas Co., 47.
12-21-16 Harrell, Texas Co. 52.
Rigs, 13; wells drilling 44; total, 56.

CALDWELL PARISH

Wells Drilling

10-11-2e Louisiana Central, Cherokee Petroleum Co. 1.
6-11-4e Cruse, Grant & Pipes 1.
9-11-3e Louisiana Central, Humble Oil & Refg. Co. 1-A.
16-11-2e Love, Wright et al 1.

Rigs

10-11-4e Beasley, T. K. Robbins 1.

Shut Down

6-12-4e Lively, Chal Daniels 1.
Rigs, 1; wells drilling 5; total, 6.

CLAIBORNE PARISH

Wells Drilling

14-23- 8 Taylor, Gilliland Oil Co. and Ramsey D-1.
24-21- 6 Lowenberg, Standard Oil Co. 25.
32-23- 5 Hollayfield, Triangle Drlg. Co. 1.
7-19- 5 Keen, Triangle Drlg. Co. 1.

Shut Down

28-19- 5 Beard, Brown et al 1.
Rigs, 0; wells drilling, 5; total, 5.

DE SOTO PARISH

Wells Drilling

9-12-11 Jenkins, Dixie Oil Co. 1.
20-12-14 Sutherlin, J. P. Evans 1.
27-12-11 Bond, Magnolia Pet. Co. 1.
36-12-11 Chaffraix, J. C. Walton 1.

Shut Down

29-15-14 Williamson, Carl K. Dresser 1.
15-12-14 Louisiana, J. P. Evans 1.
Rigs, 0; wells drilling, 6; total, 6.

GRANT PARISH

Wells Drilling

16- 9-1e Holmes, Bradley & Cozart 1.
16- 9-1w L. & A., Humble Oil & Refg. Co. 5-A.
20- 9-1e L. & A., Tunica Pet. Co. 1.

Rigs

15- 9-2w L. & A., Humble Oil & Refg. Co. 8-A.
32- 9-1e L. & A., Tunica Pet. Co. 2.

Shut Down

32- 7-1w Ball, Finn & Hurdley 1.
Rigs, 2; wells drilling, 4; total, 6.

MONROE DISTRIC

Wells Drilling

11-21-7e Sullivan, Boisseau et al 1.
12- 9- 4 Kerr, Central Co. 1.
17-19-4e Fee, Hatcher & Evans 4.
11-18-4e Miller Roberts, Hodge & Hunt 1.
36-19-4e Banks, J. M. Huber 3.
20-19-4e McErwin, Maury Drlg. Co. 2.
2-18-4e Ray & Green, R. J. O'Brien 1.
25-20-4e Millsap, Palmer Corp. 2.
35-19-4e Fee, Southern Carbon Co. 49.
14-20-1e Reeves, Arkansas Fuel Oil Co. 1.
18-23-1e Frost-Johnson, Clark Creek Oil 1.
28-21-4e Grayling, Southern Carbon Co. 4.
21-21-4e Grayling, Southern Carbon Co. 5.
32-21-4e Grayling, Southern Carbon Co. B-2.
30-20-4e Parks, Ruston Drlg. Co. 2.

Rigs

24-21-4e Crossett, Natural Gas Prod. Co. 19.
24-20-4e Burton, United Carbon Co. 1.
6-19-4e Fee, Ladell et al 34.
1-19-4e Central, Palmer Corp. 1.

Shut Down

23-15-3e Cordell, Culver et al 1.
24-18-3e Goodwin, Dickson & Frae 1.
Rigs, 4; wells drilling, 17; total, 21.

WEBSTER PARISH

Wells Drilling

21-21-10 Robbins, Alabama Pet. Co. B-1.
22-21-10 Cox, Humble Oil & Refg. Co. 2.
21-21-10 Turner, Magnolia Pet. Co. B-2.
23-21-10 Cox, Ohio Oil Co. 1.
23-21-10 Holloway, Ohio Oil Co. 3.
16-21-10 Sidney heirs, Ohio Oil Co. 7.
29-33-11 Oakley, Smitherman & McDonald 1.
1-22-10 Munn, Southern C. O. P. Co., and W. R. Ramsey 1.

Rigs

28-21-10 Nelson, Louisiana Oil & Refg. Corp. 3.
32-23- 9 Sexton, Magnolia Pet. Co. 1.
21-21-10 Tiner, Magnolia Pet. Co. 2.
Rigs, 3; Wells drilling, 8; total, 11.

WINN PARISH

Wells Drilling

1- 9-3w Edenborn, Humble Oil & Refg. Co. B-1.
8- 9-3w Edenborn, Hunt et al 1.
21-12-3w Radescich, Keen & Wolff 1.
24-13-1e Louisiana Central, C. H. Wilson 1.

Rigs

12- 9-3w L. & A., Humble Oil & Refg. Co. 7.
4-12-1w Edenborn, Ohio Oil Co. 1.

Shut Down

6-10-2w Sullivan, Cedar Creek Pet. Co. 1.
13-11-1e Urania, Cherokee Pet. Co. 1.
Rigs, 2; wells drilling, 6; total, 8.

LA SALLE PARISH

Wells Drilling

33-10-3e Louisiana Central, Cherokee Pet. Co. 3.
25-10-1e Russell, O. W. Clark D-2.
26-10-1e Herbert, Cox et al 1.
26-10-1e Herbert, Cox et al 3.
25-10-1e H. Tullos, Daniels et al 2.
26-10-1e Wright, Hamilton et al 1.
7-10-2e Urania, Hardtner Oil Co. 5.
7-10-2e Urania, A. E. Hudson 4.
7-10-2e Urania, Hunt McCurry & Zoder 2.
25-10-1e Tremont, Louisiana Oil & Refg. Corp. B-5, B-33.
26-10-1e Ratcliffe, Little River Oil Co. 1.
7-10-2e Urania, McGaha et al 1.
26-10-1e Russell, Mistrot et al 1.
11- 9-1e Zenoria, Montague Oil Co. 2.
36-10-1e Doughty, W. T. Murray 2.
36-10-1e Cockerham, Natural Gas & Fuel Corp. 1.
18-10-1e Urania, Natural Gas & Fuel Corp. B-5, E-4, E-6, E-8, K-1, K-2, K-3.
24-10-1e Urania, Natural Gas & Fuel Corp. F-2.
36-10-1e Doughty, Nelson et al 1.
16-10-1e Urania, Ohio Oil Co. 8.
6-10-3e Louisiana Central, Robinson & Long 1.
30-11-4e Cruse, Standard Drlg. Co. 1.
36-10-1e Cockerham, Standard Oil Co. 1.
18-10-2e Winberry, Sterling, Inc., 2.
19- 9-2e L. & A., Tunica Pet. Co. 3.
25-10-1e Norrid, George W. Wetherbee 3.
2- 9-1e Urania, George W. Wetherbee 1.

Rigs

25-10-1e King, J. S. Abercrombie & Co. 2.
36-10-1e Tannehill, Arizola Pet. Co. 9.
23-10-1e State, Beckman & Burckhartt 1.
7-10-2e Urania, Beckman and Freeman B-1
25-10-1e Odom, Carlton & Tharpe 1.
27-10-1e Sanders, Dickson et al 1.
24-10-1e Urania, Dixie Oil Co. 7.
26-10-1e Wright, Hamilton et al 1.
19-10-2e Urania, Hope Oil Co. 2.
26-10-1e Tullos heirs, H. L. Hunt 11.
24-10-1e Pendarvis, Ab Jones 1.
25-10-1e Russell, H. M. Jones 3.
23- 9-1e Taylor, Henry Jones 1.
26-10-1e Tisdale, Keen & Wolff 1.
35-10-1e Tremont, Louisiana Oil & Refg. Corp. A-9.
25-10-1e Zimmerman, Love et al 5.
18-10-2e Urania, Natural Gas & Fuel Corp. K-4, K-5.
19-10-2e Urania, Trio Oil Co. 2.
15- 9-3e L. & A., Tunica Pet. Co. 4.

Shut Down

26-10-1e Herbert, Cox et al 2.
25- 9-2e Cotton, Minnesota Oil Corp. 1.
25-10-1e Russell, Sherman et al 4.
Rigs, 20; wells drilling, 38; total, 58.

SCATTERED WILDCATS

Wells Drilling

3-20-4w Cooper, Arkansas Fuel Oil Co. 1.
47- 7- 5 Guellat, Davidson et al 1.
3-13- 7 Ayers, Forrest, trustee, 1.
4-11- 6 Edenborn, J. F. Palmer 1.
24-12-11 Hollingworth, Carnahan & Kyle 2.
11- 5-9w Peavy-Wilson, J. B. Greer 2.

Rigs

34-15-3w Horton, Clarence Housman 1.
8- 7-13 Sabine, L. M. Emlet 1.
19- 4-11 Drake, Toro Pet. Co. 3.

Shut Down

12-20-3w Davis, Buckley & Palmer 1.
51-16-14e Yerger, Bannon et al 1.
13-11-10 Powell, Alden Oil Co. 1.
9-7-12 Bowman, L. M. Emlet 5.
14-7-14 Bowman, L. M. Emlet 7.
Rigs, 3; wells drilling, 11; total, 14.

ROCKY MOUNTAIN AREA

WYOMING

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Big Muddy	0	0	0	0	0	4	4
Salt Creek	27	6,456	1	0	20	133	153
Lance Creek	0	0	0	0	0	1	1
Big Horn Basin	2	0	2	0	3	58	61
Lost Soldier and Carbon Co.	3	0	2	1	4	27	31
Rock River Dis.	0	0	0	0	0	15	15
Fremont Co.	0	0	0	0	1	32	33
Osage	2	30	0	0	3	4	7
Natrona County	0	0	0	0	0	9	9
Lincoln and Uintah Counties.	2	150	0	0	4	30	34
Baxter Basin	0	0	0	0	0	7	7
Miscellaneous	1	0	1	0	2	28	30
Total June	37	6,636	6	1	37	348	385
Total May	50	4,490	7	0	35	281	316
Difference	13	2,146	1	1	2	67	69

MONTANA

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Sunburst	44	4,839	18	3	11	62	73
Cat Creek and Miscellaneous	3	0	3	0	6	86	92
Total June	47	4,839	21	3	17	148	165
Total May	24	5,368	2	3	15	134	149
Difference	23	529	19	0	2	14	16

COLORADO

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total June	13	690	6	3	14	101	115
Total May	10	4,480	1	0	14	102	116
Difference	3	3,790	5	3	0	1	1

UTAH

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total June	0	0	0	0	2	32	35
Total May	0	0	0	0	3	31	34
Difference	0	0	0	0	0	1	1

NEW MEXICO

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Total June	12	195	7	0	13	132	145
Total May	23	955	11	0	14	130	144
Difference	11	760	4	0	1	2	1

WYOMING
BIG MUDDY
Wells Drilling
3-33-76 Barber, Glenrock Synd. 2.
9-33-76 Crary, Texas Prod. Co. 33.
8-33-76 Humphreys, Continental Oil Co. 39.
Shut Down
3-33-76 Fenix, Continental Oil Co. 4-F.
Rigs, 0; wells drilling, 4; total, 4.

SALT CREEK
Rigs
6-39-78 SE, Mtn. & Gulf 8-A.
35-40-79 SE, Midwest Oil Co. 31-A.
32-40-78 Continental Oil Co. 21 and 29.
13-39-79 SE, Blackstone Salt Creek 4-F.
34-39-79 SW, Mammoth Oil Co. 3-2.
34-40-78 NW, Mammoth Oil Co. 305.
28-39-78 NW, Mammoth Oil Co. 405.
28-39-78 NE, Mammoth Oil Co. 406.
13-38-78 SW, Wyoming Teapot Oil Co.
16-39-78 NE, Nicholaysen et al.
19-40-79 NE, Norris Oil Co. 18-A.
10-38-78 NW, Mammoth Oil Co. 202.
9-39-78 NE, Sinclair Wyoming 11.
6-39-78 NE, Mt. and Gulf 29-A.
31-39-78 SE, Teapot Development Co.
1-39-79 SE, Continental Oil Co. 11-A.
6-39-79 NW, Carter Oil Co. 12-D.
17-39-79 SE, Argo Oil Co. 2-M.
8-39-78 NE, Western States O. & L. 21-A.
Wells Drilling
23-40-79 SE, Wyoming Oil Fields 24-L.
26-40-79 NE, Wyoming Oil Fields 13-L.
24-40-79 SW, Wyoming Oil Fields 19-A.
23-40-79 SE, Wyoming Oil Fields 34-L.
25-40-79 NW, Wyoming Oil Fields 31-L.
25-40-79 NW, Wyoming Oil Fields 19-L.
26-40-79 NE, Wyoming Oil Fields 36-L.
23-40-79 SW, Wyoming Oil Fields 16.
26-40-79 NE, Wyoming Oil Fields 27.
26-40-79 NE, Wyoming Oil Fields 23.
2-39-79 NE, Wyoming Asso. 3-A.
23-40-79 SE, Wyoming Asso. 33-A.
23-40-79 NE, Wyoming Asso. 24-A.
26-40-79 SE, Wyoming Asso. 31-A.
35-40-79 SE, Wyoming Asso. 33-A.
14-40-79 NW, Wyoming Asso. 21-A.
30-40-79 SW, Wyoming Asso. 19-A.
24-40-79 NW, Wyoming Asso. 19-A.
14-40-79 NW, Wyoming Asso. 22-A.
14-40-79 NW, Wyoming Asso. 16-A.
26-40-79 SW, Wyoming Asso. 21-A.
26-40-79 NE, Wyoming Asso. 4-L.
14-40-79 SW, Wyoming Asso. 13.
24-40-79 SW, Wyoming Asso. 16.
26-40-79 NW, Wyoming Asso. 34.
26-40-79 NW, Wyoming Asso. 20.
35-40-79 NW, Wyoming Asso. 24.
26-40-79 NE, Wyoming Asso. 28.
26-40-79 NW, Wyoming Asso. 33.
34-40-79 NE, Wyoming Asso. 24.
14-40-79 SE, Wyoming Asso. 22.
35-40-79 NW, Wyoming Asso. 36-A.
35-40-79 SE, Wyoming Asso. 6-A.
34-40-79 NE, Wyoming Asso. 29-A.
25-40-79 SW, Wyoming Asso. 24-A.
24-40-79 NW, Wyoming Asso. 13-A.
24-40-79 SE, Salt Creek Cons. 36-L.
31-40-79 NE, Salt Creek Cons. 19-A.
31-40-78 NE, Salt Creek Cons. 18-A.
34-40-78 SE, Salt Creek Cons. 36-A.
31-40-78 SE, Salt Creek Cons. 6-A.
31-40-78 SW, Salt Creek Cons. 1-A.
3-39-79 NE, Salt Creek Cons. 1-A.
12-40-79 SE, Mt. and Gulf 29-A.
14-40-79 NE, Midwest Oil Co. 19-A.
23-40-79 SW, Midwest Oil Co. 1-L.
35-40-79 SW, Midwest Oil Co. 34-L.
35-40-79 NE, Midwest Oil Co. 24-A.
26-40-79 SE, Midwest Oil Co. 16-A.
27-40-79 SE, Midwest Oil Co. 15-A.
26-40-79 SE, Midwest Oil Co. 15-A.
26-40-79 SW, Midwest Oil Co. 18-A.
14-40-79 NE, Midwest Oil Co. 3-A.
27-40-79 SE, Midwest Oil Co. 34-A.
26-40-79 SW, Midwest Oil Co. 15-A.
35-40-79 SW, Midwest Oil Co. 3-L.
23-40-79 NE, Midwest Oil Co. 31-L.
35-40-79 NE, Midwest Oil Co. 19-L.
25-40-79 NW, Midwest Oil Co. 4-L.
35-40-79 SW, Midwest Oil Co. 6-L.
35-40-79 SW, Midwest Oil Co. 31-L.
26-40-79 SE, Midwest Oil Co. 1-L.
35-40-79 NE, Midwest Oil Co. 16-L.
35-40-79 SW, Midwest Oil Co. 13-L.
26-40-79 SW, Midwest Oil Co. 15-L.
2-39-79 NW, Midwest Oil Co. 6-L.
26-40-79 SW, Midwest Oil Co. 3 and 4.
14-40-79 NE, Midwest Oil Co. 16-A.
11-40-79 SE, Midwest Oil Co. 33-A.
14-40-79 NE, Midwest Oil Co. 21-A.
35-40-79 SW, Midwest Oil Co. 1-A.
14-40-79 NE, Midwest Oil Co. 22-A.
23-40-79 NW, Midwest Oil Co. 16-A.
34-40-79 NE, Midwest Oil Co. 3-A.
2-39-79 NW, Midwest Oil Co. 3-A.
14-40-79 NW, Midwest Oil Co. 15-A.
27-40-79 NE, Midwest Oil Co. 22-A.
11-40-79 SW, Midwest Oil Co. 24-A.
35-40-79 NE, Midwest Oil Co. 31-A.
35-40-79 SW, Midwest Oil Co. 31-A.
27-40-79 SE, Midwest Oil Co. 30-AS.
25-40-79 SE, Midwest & Wyo. Asso. 13-A.
36-40-79 SW, Midwest & Wyo. Asso. 24-A.
25-40-79 NE, Midwest & Wyo. Asso. 16-A.
25-40-79 SE, Midwest & Wyo. Asso. 19-A.
12-40-79 SW, Midwest & Wyo. Asso. 14-A.
36-40-79 NW, Midwest & Wyo. Asso. 19-A.
13-40-79 NW, Midwest & Wyo. Asso. 14-A.
15-40-79 SE, Prairie Oil & Gas 13.
7-39-78 SE, Continental Oil Co. 8-A.
30-40-78 NE, Continental Oil Co. 20.
19-40-78 SE, Continental Oil Co. 13.
34-40-78 Continental Oil Co. 12-A.
26-40-79 SE, Wyoming Oil Fields 19-A.
23-40-79 SE, Wyoming Oil Fields 4-L.
23-40-79 SW, Wyoming Asso. 19-L.
14-40-79 SE, Wyoming Asso. 19-L.
24-40-79 NW, Wyoming Asso. 22-A.
14-40-79 SE, Midwest Oil Co. 15-A.
26-40-79 SE, Midwest Oil Co. 15-L.
27-40-79 NE, Midwest Oil Co. 24-L.
2-39-79 NW, Midwest Oil Co. 3-L.
23-40-79 NE, Midwest Oil Co. 29-A.
12-40-79 NW, Midwest & Wyo. Asso. 27-A.
21-40-79 Meabon et al.
5-39-79 NW, Western States O. & L. 29-A.
2-39-79 NW, Salt Creek Cons. 21-L.
28-40-79 SW Jupiter Oil Co. 34-S.
11-39-79 Middy, E. T. Williams 2.
Shut Down
26-40-79 NE, Wyoming Oil Fields 22-L.
26-40-79 SE, Wyoming Oil Fields 22-L.
35-40-79 SE, Wyoming Asso. 21-SD.
23-40-79 SE, Wyoming Oil Fields 6-L.
26-40-79 NE, Wyoming Asso. 31-L.
26-40-79 SE, Midwest Oil Co. 16-L.
[illegible]-40-79 NW, Wyoming Oil Fields 36-L.
[illegible]-38-78 SE, Staley Foley Synd. 34-A.
35-39-78 SW, Staley Foley Synd. 15-A.
26-40-79 SE, Wyoming Asso. 22-L.
10-40-79 SE, Empire State Oil 25-A.
28-39-78 NE, Mammoth Oil Co. 101.
29-39-78 NE, Mammoth Oil Co. 108.
28-38-78 NE, Mammoth Oil Co. 304.
28-39-78 SW, Mammoth Oil Co. 302.
28-39-78 NW, Mammoth Oil Co. 205.
4-38-78 NW, Mammoth Oil Co. 101.
23-39-78 NE, Evans Oil Co.
29-39-78 NE, Omaha Lusk Oil Co.
6-40-79 NE, Mt. and Gulf 34-A.
15-40-79 Prairie Oil & Gas 10.
32-40-78 SW, Jupiter Oil Co. 27-A.
2-39-79 NW, Midwest Oil Co. 15-L.
Rigs, 20; wells drilling, 133; total, 153.

LANCE CREEK
Shut Down
18-35-65 NE, Union Oil Co.
Rigs, 0; wells drilling, 1; total, 1.

BIG HORN BASIN
Rigs
5-47-90 Hetzler, Ohio Oil Co. 1.
8-51-100 Sonners, Ohio Oil Co. 3.
5-42-90 Black Mt., Utah Oil & Refg. 5.
Wells D illing
24-56-98 Garland, Prod. & Refs. 2.
11-40-90 Garry Oil & Dev. Co.
15-49-91 Shaffer & Tilley.
18-46-92 Washakie, Ohio Oil Co. 4.
18-44-93 West Zimmerman Butte Oil.
8-19-100 Union Oil Co.
20-52-101 NE, Washington Oil & Gas Co.
1-44-102 T. N. Clark et al.
21-53-101 Guiterman et al.
14-48-102 Big Horn Dev. Co.
21-53-101 Taylor Brothers.
746-92 Washakie, Ohio Oil Co. 2.
5-51-97 SW, C. M. Carroll et al.
9-54-94 SW, Wisconsin-Hines Co.
15-44-95 SW, F. L. Pierce.
19-54-93 SW, Crystal Creek Synd.
32-47-100 NW, Prairie Oil & Gas.
19-46-98 State, Ohio Oil Co. 41 and 42.
3-56-98 Elk Butte Oil & Gas.
34-43-91 SE, Union Oil Co. 1-A.
28-43-91 NW, Union Oil Co. 1-A.
10-56-95 SE, Allen Oil Co.
31-43-93 Utah Oil & Refg. 3.
33-43-94 SW, Wyoming Montana Oil Co.
17-36-98 Washakie, Ohio Oil Co. 1.
28-44-95 NE, F. A. McPherson.
2-44-96 F. A. McPherson.
11-49-102 T. A. Stanciiff.
25-43-91 SW, Utah Oil & Refg. 4.
29-56-97 SW, Utah Southern Oil.
-55-97 Lot 43, Standard of Calif.
8-43-91 Murphy Dome, Prod. & Refs. 1.
33-56-98 Cross Gas, Ohio Oil Co. 2.
21-53-101 Cody Oil & Gas Co. 2.
9-46-101 Union of Calif.
15-55-97 Garland, California Co. 2.
Shut Down
2-47-100 NE, Midwest Refg. Co.
5-44-93 Royal Oil & Refg. Co.
35-57-91 NE, American Indian Oil.
4-51-100 Florence Oil Co.
3-55-97 Griffin, Allen Oil Co.
34-56-97 Linton, Allen Oil Co.
31-45-99 NW, Kasoming Oil Co.
27-46-98 Rankin, Dickie Oil Co.
8-46-98 Grass Creek Prod.
3-56-90 Back Pet. Co.
16-47-100 Big Horn Dev. Co.
19-51-92 Bruce Holding Co.
34-43-92 C. D. Markham et al.
10-54-95 SE, Westland Oil Co.
35-55-95 Westland Oil Co.
20-54-100 NE. Pittsburg-Southwestern.
11-49-102 Omar Oil & Gas.
36-58-100 Local Oil Co.
18-46-98 Local Oil Co.
10-56-98 Tumador Oil Co.
19-51-92 Torchlight Oil Corp.
Rigs, 3; wells drilling, 58; total, 61.

LOST SOLDIER
Rigs
3-26-90 Prairie Oil & Gas 72-A.
29-26-87 Prod. & Refs. 18.
24-21-88 E. R. Goode.
12-19-87 Mariand Oil Co.
Wells Drilling
11-26-90 Prairie O. & G. 35-A.
16-26-88 General Pet. Co.
25-26-87 Prod. & Refs. 17.
3-26-90 SE, Prairie O. & G. 70-A.
11-26-90 Prairie O. & G. 66-A, 67-A.
28-26-88 Prairie O. & G 1-B.
11-26-88 Prairie O. & G. 71A.
11-26-90 Wyo. Ill., Prod. & Refs. 5.
35-26-88 Prod. & Refs. 3.
20-21-80 Prod. & Refs. 14.
7-26-90 Prod. & Refs. 5.
1-26-90 Prod. & Refs. 6.
14-20-88 Lake Valley Oil Co.
Shut Down
3-26-90 Sand Hills Oil Co. 5.
28-26-88 Govt., Columbia Pet. Co.
4-26-90 SE, Sand Hills Oil Co. 4.
9-26-90 SE, Major Oil Co.
26-25-89 NW, E. R. Goode.
94-27-90 SW, Annabelle Wyoming Oil Co.
10-26-90 Prairie O. & G. Co. 65.
28-26-86 Portland Wyoming 1, 2.
21-26-86 Portland Wyoming 3.
9-21-84 St. Marys, Prod. & Refs. 2.
11-26-90 Prairie O. & G. 22.
3-25-86 Govt., General Pet. Co. 2.
Rigs, 4; wells drilling, 27; total, 31.

ROCK RIVER
Wells Drilling
3-19-78 H. & C., Ohio Oil Co. 4.
2-19-78 H. & C., Ohio Oil Co. 11.
34-20-78 SW, M. L. Lundy.
8-17-77 SE, Texas Prod. Co.
13-17-77 SE, Texas Prod. Co.
25-21-79 SE, Southwestern Pet. Co.
Shut Down
34-23-79 Central Pipe Line Co.
1-18-78 Dutton Creek, Midwest Refg. Co.
10-18-77 Carbon County Oil Co.
12-20-77 McLaughlin et al.
26-21-78 NW, Southwestern Pet. Co.
26-21-78 SW, G. A. Briggs.
34-23-79 NE, Kanawha O. & G.
23-21-79 SE, Southwestern Pet. Co.
36-21-79 NW, Southwestern Pet. Co.
Rigs, 0; wells drilling, 15; total, 15.

FREMONT COUNTY
Rigs
20-33-94 Winter-Baker Ints.
Wells Drilling
10-32-95 Prod. & Refs. 5.
30- 2- 2 Hudson, Prod. & Refs. 1.
21- 1- 1 Bridger Oil Co.
17-27-95 Brimmer, Prairie O. & G. 2.
7-27-95 Van Wyo., Prairie O. & G. 1.
24-32-95 Seal Oil Assn.
9-31-98 Martin F. Fold.
15-34-90 Ward Oil Co.
14-32-80 Meyers Pet. Co.
13-28-93 Spencer et al.
10-28-92 SE, Union Oil Co.
18-28-93 Prod. & Refs. 1.
13-28-93 Prod. & Refs. 3.
27- 6- 3 Kinney Coastal Oil Co.
21- 1- 1 Wyoming Syndicate.
14-32-95 NW, Riverton Pet. Co.
15- 5- 1 Carter, Union Oil Co.
26-27-93 American Workers Oil (Zola).
30- 1- 2 Wm. M. Campbell.
Shut Down
13-28-93 Prod. & Refs. 2.
36-37-94 Wyoming Syndicate.
6- 6- 2 SW, Union Oil Co.
10-36-94 SW, Myrin Oil Co.
13-26-95 Sage Creek Pet.
29-27-95 Fremont Pet. Co.
22- 6- 2 Miles City Pet. Co.
3- 1- 2 NE, Teton Pet. Co.
4-31-98 Derby Dome Oil Co.
4-31-98 Burnside Oil Co.
15- 6- 2 Union Oil Co. 11, 12.
15-32-95 Texas Prod. Co.
Rigs, 1; wells drilling, 32; total, 33.

OSAGE
Rigs
30-46-63 NE, Glenn Oil Co.
31-47-63 L. B. Hansen.
17-46-63 LaFleische Oil Co.
Wells D illing
Fawcett Ranch, Harry Briggs et al.
32-46-63 Wyoming Oil & Gas.
Shut Down
10-45-61 Lenhart & Biggs.
8-46-63 Griffith Oil Co.
Rigs, 3; wells drilling, 4; total, 7.

NATRONA COUNTY
Wells D illing
13-29-82 Chase, Ohio Oil Co.
3-37-85 Notches, Midwest Refg. Co.
32-38-83 Wilson Dome, Marland Oil Co.
30-34-81 Mosher No. 5 Synd.
23-34-82 Bradford Wyoming.
32-34-77 Geary Dome, Continental Oil Co.
Shut Down
15-32-82 Bessimer Bend Dev. Co.
5-39-80 NW, Vernon Oil Co.
10-35-85 New York Oil Co.
Rigs, 0; wells drilling, 9; total, 9.

LINCOLN AND UINTAH COUNTIES
Rigs
21-28-113 Tip Top Oil Co.
12-39-113 Cretaceous Oil Co.
27-27-113 Beneficial Oil Co.
4-26-113 Wyoming Reserve Oil Co.
Wells Drilling
20-19-116 C. C. Conger.
14-21-117 NE, Pioneer Oil Co.
30-15-118 NE, Stanberg Pet. Co.
22-27-113 NW, W. F. Atkins.
26-27-113 NW, Myrta Bennett.
17-27-113 SE, Elk Horn Oil Co.
Near Afton, Great Western Oil Co.
23-31-113 Three States Oil Co.
3-26-113 Superior Oil Co.
15-21-117 Pacific Properties Co.
6-15-118 Vulcan Oil Co.
7-28-114 Chas. Lackey et al.
34-27-113 Wyotah Oil Co.
23-27-113 Wyotah Oil Co.
23-27-113 Fawcett Ints.
6-15-118 Olson Bros.
Sec. 26 LaBarge, Wooten Ints.
Sec. 22 LaBarge, Portland Oil Co.
8-26-113 SE, Reece Oil Co.
27-27-113 NW, Reece Oil Co.
9-26-113 Uintah-Transcontinental Oil.
Shut Down
32-19-110 NE, John Johnson, Granger O. & G.
22-28-112 NE, Margaret Kay.
24-15-118 NW, Mrs. D. Connell 3.
22-26-113 NW, Big Piney Oil Co.
4-26-113 SE, Uintah Oil Co.
3-26-113 Wyoming Reserve Oil Co.
35-27-113 SE Asso. Prod. Synd. 2.
27-27-113 NW, Beneficial Oil Co.
32-19-116 Conger et al.
Rigs, 4; wells drilling, 30; total, 34.

BAXTER BASIN
Shut Down
26-17-104 Associated Oil Co. 3.
23-17-104 SE, Associated Oil Co.
24-17-104 SE, Montical Oil Co.
8-16-104 SE, Montical Oil Co.
30-18-104 Midwest Refg. Co. 6-AX.
26-17-104 SE, Associated Oil Co.
27-17-104 Montical Oil Co.
Rigs, 0; wells drilling, 7; total, 7.

MISCELLANEOUS
Rigs
Baggs Dome, M. M. Armstrong.
Agate Basin, Hollingsworth et al.
Wells Drilling
5-31-71 Great Northern Oil Co.
17-46-82 R. C. Tarrant et al 2.
12-26-27 Platte Valley Drilling Co.
8-44-60 Briggs & Sartin.
5-51-67 C. M. Carroll et al.
28-42-78 Seattle Syndicate.
Guernsey Dist., Illinois Syndicate.
28-42-79 Montana Giant Oil Co.
Buffalo Dist., Kinney Coastal Oil Co.
15-33-68 SW, Schuyler et al.
1-32-68 A. E. Maughft et al.
32-62-67 SW, Western Cons. Oil Co.
4-32-82 SE, Carl Sackett et al.
7-48-82 Fairway Oil Co.
Shut Down
24-49-64 Osage T ust Co.
31-50-69 Roset Oil Co.
20-29-68 Nebraska Oil Co.
18-39-78 Glendo O. & G.
6-28-82 Jay Em, Foreman et al.
1-44-61 Osage Trust Co.
9-41-80 Newcome et al.
31-37-67 NW, Atlas Oil Co.
11-45-65 Reserve O. & G.
28-47-65 NE, Gose Syndicate.
35-48-64 Lilley, Pump Creek O. & G.
13-26-66 A. E. Jacobs.
1-44-61 Gose Syndicate.
1-32-65 Manville O. & G.
Rigs, 2; wells drilling, 28; total, 30.

MONTANA
CAT CREEK
Rigs
12-15-28 NE, Schaffer Oil Co.
26-15-30 Woods, Continental Oil Co. 2.
Wells D illing
11-15-29 Cooke-Coolidge-Ida.
12-15-30 NE, Standard of California 7.
21-15-30 Masser, Kessling Oil Co.
23-14-28 Winnett Pacific Oil Co.
1-15-29 Custer Oil Co.
9-15-29 NE, Frantz Oil Corp.
13-15-29 Green, Frantz Oil Corp. 10.
14-15-29 Clayton, Frantz Oil Corp. 15.
36-16-28 NE, Hardrock Oil Co.
5-15-29 Midwest Refg. Co.
7-15-29 NW, Hogan et al 2.
11-15-29 Fifty-Six Pet. Co. 14.
Shut Down
10-15-29 Fifty-Six Pet. Co.
15-15-30 Swartz et al.
28-16-28 Peerless Oil Co.
Rigs, 2; wells drilling, 15; total, 17.

KEVIN SUNBURST
Rigs
11-25- 2 Stockmans Natl. Bank.
29-35- 1 Benton, Arronow Oil Co.
4-23- 4 Swears, Beardsley 1.
20-31- 2 McBride, Canadian American Oil.
25-36- 2 Troy Inland Oil Co.
17-31- 1 Potlatch Oil Co. 2.
30-35- 1 Stannard, Wallace Oil Co.
20-35- 1 Steele, Big West Oil Co.
1-35- 2 Sindon, Ohio Oil Co. 2.
18-34- 1 Johnson, Ohio Oil Co. 1.
23-35- 2 Reeg, Ohio Oil Co. 3.
Wells Drilling
30-35- 1 Maughans, Ohio Oil Co. 10.
25-35- 2 Byrne, Kobes-Howe-McCormick.
19-35- 1 Kalispell-Kevin, P. M. K. Oil Co. 3.
13-34- 2 Minot-Craig 1.
34-35- 2 Lashbaugh, Ferdig Oil Co. 14.
20-33- 1 Bailey, Flood-Watson 1.
31-35- 1 Byrne, Fulton Oil Co. 16.
36-35- 2 State, Homestake Exploration 10.
35-35- 2 Able, Ferdig Oil Co. 8.
30-35- 2 Stannard, Tri State Oil Co. 9.
30-35- 1 Stannard, Rice Oil Co. 10.
25-35- 2 Stannard, Wyomont P. & R. 8.
31-35- 1 Allen, Big West Oil Co. 18.
11-34- 1 Peterson, Sturdevant Oil Co.
19-35- 1 Kalispel-Kevin, Arcus Oil Co. 2.
11-34- 3 Freemke, D. A. S. Oils 2.
10-35- 3 Bruins, Ohio Oil Co. 3.
35-35- 2 McCormick, Diamond Oil Co. 6.
27-35- 1 Zimmerman, Model Oil Co. 1.
1-34- 2 Steele, Oldsbury Synd.
27-35- 2 Victoria Sunburst.
31-35- 1 Bryne, Rose Oil Co. 13.
26-35- 3 Sohn, Trap Oil Co.
25-35- 2 Byrne, Howe et al.
24-35- 2 Fryburger, Maughans et al.
7-34- 1 Russel, Reservation Oil Co.
30-35- 1 Stannard, Tri State Oil Co. 10.
17-34- 1 Jones, Murrills 1.
11-34- 1 Cascade O. & G.
30-35- 1 Stannard, Rose Oil Co. 3.
11-34- 1 Peterson, Sturdevant Oil Co.
9-32- 2 Suhr, Sunburst Prod. Co.
33-34- 2 NE, Frezier Oil Co.
8-34- 2 Pittsburg Montana Oil.
32-36- 2 Roundsley, Sunburst O. & G.
24-32- 1 Shelby Synd.
28-37- 2 McAlpine, Sparton Oil Co.
20-36- 2 Halter, Sunburst Prod. Co.
18-34- 1 Skinner, Creel et al.
32-35- 1 Putnam, Keystone Oil Co.
7-34- 1 Harte, Russel et al.
30-35- 1 State, Tri State Oil Co. 3.
9-34- 2 O'Haire et al.
35-35- 2 Sunburst O. & G.
22-35- 2 SW, Lorenson et al.
2-34- 2 DeGroate, Ethridge Basin O. & G.
29-35- 1 Maughan, Sweeney Oil Co. 4.
17-35- 2 Frazier, Rice Oil Co.
30-35- 1 Stannard, Tri State Oil Co. 5.
26-35- 2 Abell, California Co. 6.
8-34- 2 Hurley, McDonald et al.
24-34- 1 DeMaire, Postlewaite et al.
1-34- 2 Steele, Bruce Radigan 2.
1-34- 2 Faunce, McIntire-Beckett.
34-35- 2 Lashbaugh, Ferdig Oil Co. 11.
Shut Down
21-36- 3 Herman, Kevin O. & G. 3.
28-35- 1 Shelby-Federal-Miller.
23-33- 1 Webb, Shelby O. & G.
12-34- 1 Peterson, Lucky Forty Oil Co.
13-32- 2 Campbell, Campbell Synd.
16-34- 2 Rainbow Oil Co.
21-34- 1 Adams, Potlatch Oil Co.
Rigs, 11; wells drilling, 62; total, 73.

MISCELLANEOUS
Rigs
24-14-15 Fullerton O. & G.
12-10-32 Hibbard Oil Co.
4-28-30 Mid-Continent Oil.
34-23- 2 Rainbow Synd.
Wells Drilling
25- 1-21 NW, Delmar Oil Co. 2.
23- 1-21 Delmar Oil Co. 1.
13- 6-17 Mackay, Ohio Oil Co. 1.
24- 1-21 Diamond-Luthold, Record Pet. Co. 3.
36- 1-12 State, Springdale Oil Synd.
24- 1-21 SW, Record Pet. Co. 4.
Medicine Hat, Roth Syndicate.
34-23- 2 Allen Oil Co.
5-35- 3 Bell Fey Co.
1-31-31 Big Dome Oil Co. 2.
28- 8-45 Montana Belle O. & G.
25-17-24 California Co.
21-37- 5 Utah Western Pet. Co.
21- 7-21 SW, Atlantic Pet. Co.
33-19- 7 SW, Hager Stephenson O. & G.
13- 8- 2 Coal Ridge, Montana O. & G.
5- 3-16 Montana Portland Oil Co.
33-16-23 H. H. Swarts, Jr.
9-31-19 California Co.
14-14-25 Flatwillow, A. M. Z. Synd.
32-25-30 Butler O. & G.
24-30- 1 Continental Prod. Co.
17- 3-19 Snyder, Mid Northern Oil Co.
4-27-20 California Co.
20-24- 1 C. A. McDonald et al.
16-15-25 SW, Great Northern Mutual.
3-27- 8 Robinson et al.
Benton Lake, Browning et al.
McDonald Creek, Wilson-Fisher 3.
32-36- 2 Weill Synd.
7- 8-58 NE, California Montana.
17- 2-18 NE, Gibson Land Co.
29-38-28 Glasgow Explor. Co.
5-15-29 Deavereaux, Deavereaux Oil Co.
25-12- 1 Ainsworth, Neudigate Est. Ints.
18-30- 3 Kelley, Great Northern Producers.
8-21-19 Bowes, California Co.
25-15-25 SW, Winnet Oil Co.
4- 2-25 SW, McMinnemin et al.
18-22- 3 Elk Horn Oil Co.
24-10-39 Johns et al.
Shut Down
2-26- 2 Jones, M. M. Edwards.
18- 3-33 SW, Securities Prod. Co.
5- 2-23 NE, American Indian Oil Co.
35-32-32 SW, Bowdoin O. & G.
7-27- 7 NW, Circle Oil Co.
26-10-29 Stellar O. & G.
32-30- 2 Denzer, Drake Oil Co.
18- 6-23 Mennemier & Newman.
6-13-24 Fulton Oil Co.
30-15-26 Winnet Shallow Oil Synd.
7-21- 1 Tri-City Oil Co.
Devils Basin, Alberta Block Coal Co.
Devils Basin, Montana Central Oil Co.
25- 2-27 Gladys Belle Oil Co.
12-11-13 Kalispell Synd.
6- 5-25 Grey Eagle Oil Co.
2-28- 2 NE, Dry Fork Oil Co.
8- 4-22 NE, Hoosier Oil Co.
24- 5- 8 Potter Basin O. & G.
10-18- 2 NE, Moscow-Idaho Oil.
38-30- 4 NW, West Virginia Oil Co.

27-36-22 SW, Mountain Chief Oil 2.
24-14-25 NW, Henry Seibert.
14-31- 1 NW, Dunkirk Oil Co.
32- 3-16 SW, Consolidated O. & G.
34-22- 1 G. N. Mutual.
6- 2-24 SE, American Indian Oil Co.
23-14-28 SE, Winnet Pacific Oil.
9-10-28 SE, Stellar O. & G.
5-35- 1 NE. F. G. Ostland.
Rigs, 4; wells drilling, 71; total, 75.

COLORADO

Rigs

33- 5-91 Knowlton, Texas Prod. Co. 8.
10- 2-44 Yuma Valley Oil Co.
1- 8-68 Morrel, Petroleum Prod. Co.
17- 8-68 Ft. Collins Chief Oil.
29-10-68 American Pet. Co.
12-38-78 Green Mountain Pet. Co.
31- 9-68 Midway O. & G.
27- 2-70 Rainbow Oil Dev. Co.
26- 9-69 NW, Farrel et al.
8- 9-68 NE, Union Junior Oil Co.
36-10-69 State, Seneca Oil Co.
13- 6-68 SE, Panuco Exploration Co.
10-10-61 SE, Daugherty et al.
13- 1-46 NW, Yuma Oil Co.

Wells Drilling

24- 2-103 Tidewater Asso. Oil Co.
33- 1-70 Denies, Repollo Oil Co.
30- 8-68 Blunck, Union Oil Co. 2, 3.
30-10-68 Plummer, Union Oil Co. 1.
7- 9-68 Yokey, Union Oil Co. 1.
19- 5-93 Rolapp, Shaffer O. & R.
10- 4-91 Wick, Texas Prod. Co. 3, 4.
4- 6-59 Belmont Oil Co.
19- 8-68 Larson, Union Oil of California.
30- 8-68 Whitaker-Blunck, Union Oil Co. 2.
16-10-69 Buckeye, A. A. Rollestone Co.
28- 8-65 Watkins, Miller Oil Co.
28-28-52 South East Colorado Oil Co.
18- 6-86 Dennis, Texas Prod. Co.
7- 9-68 Gault-Platt, Union Oil Co. 2.
24- 6-61 Patterson, Platte Valley Pet. Co.
1- 2-68 Orrison, Municipal Oil Co.
33- 8-69 NE, Hobert Pet. Co.
21-20-69 Majada O. & G.
8-20-69 Florence, Rosie Oil Co.
8-20-69 Wallace O. & M. Co.
23-33-12 Erdman Drlg. & Prod. Co.
13-33-12 NW, W. H. Hall et al.
34-32-56 No Jack Oil Co.
8- 9-69 Warren, Union Oil of Colorado.
6- 7-68 Brown, Fifty-Four Oil Co.
13-33-13 Hall-Murray Oil Co.
5- 8-103 Gypsy Oil Co.
31- 6-98 Morgan, Union Oil Co.
4- 6-68 Webster, Douglass Oil Co.
17- 5-64 Hog Ranch, Roland Oil Co.
5- 6-68 Majestic Oil Co.
4-32-67 Tulsa Oil Leasing Co.
34- 8-68 Ruff, Victory Oil Co.
9-12-68 Panuco Exploration.
1- 9-68 NW, Great Northern Oil Co.
25- 1-69 Everhard, Boulder Oil Corp.
30-27-45 NW, Lamar Oil Co.
1- 5-69 Deegan, A. A. Rollestone Oil Co.
4-10-69 NE, San Carlos Oil Co.
4- 6-68 Webster, Associated Oil Co.
6- 8-102 Linquist, Midwest Refg. Co.
14- 1-66 Smith, Retter Oil Co.
14-17-70 Mutual Oil Dev. Co.
13- 9-79 McCallum, Continental Oil Co.
16-21-65 Columbus Heights Oil Co.
9-17-67 John, Jr., Ken Creek Oil Co.
Fremont County, Parkdale O. & G.
11-10-69 Buckeye, Union Oil Co. 4.
7- 9-68 Bubble Lake, Union Oil Co. 1.
18- 9-68 Elder, Union Oil Co.
7- 9-68 Stutchel Lake, Union Oil Co.
28-28-52 SE, Colorado Oil Co.
15- 4-91 Pohlman, Texas Prod. Co.
27-20-69 Good Luck Oil Co.
30-10-68 Warren, Poudre River Oil Co.
1- 8-69 Warrel, Cons. Oil Fields.
26- 7-92 NE, Boyles Oil Co.
15-20-69 Continental Oil Co. 571.
31-18-51 Mineral Exploration Co.
16-20-69 E. R. Goode et al 2.
17- 9-68 Elder, Farrels Associates.
24- 8-69 Ruff, Equitable Oil Co.
15-21-65 Union Oil of Colorado.
Florence, Florence Pet. Co.
9-12-62 Ullum, Roland Oil Co.
19-16-48 Scholtz, California Co.
3-32-12 Leidecker Pet. Co.
30-27-45 Johnson, Chesapeake Oil Co.
8- 8-102 Smith, Sun Oil Co.
6-23- 2 Hutchinson, E. J. Miley.
4-34- 2 Frisco, Mt. States Oil Co.
11- 4- 8 H. H. Temple et al.
4-23-62 State, Bent County O. & G.
11- 1-44 Yuma, Hessick Drlg. Co.
17-34- 2 C. W. Kirkwood.

Shut Down

32-20-68 Baxter, Salida O. & R. Co.
36- 9-69 NW, Atlantic Pet. Co.
31- 9-26 NW, White River Dev. Co.
22-21-100 Wm. Morris et al.
30- 2-102 SE, Midgest Refg. Co.
13- 8-68 Hoff, Centennial & Sunset.
28- 5-91 Freeman, Texas Prod. Co.
33- 5-91 Hamilton, Texas Prod. Co.
28-28-52 Associated Oil of Colorado.
28-27-70 Gehrung, Sand Hills Oil Co.
18- 6-86 Texas Prod. Co. 2.
32-31-61 Colorado O. & G.
23- 6-69 Ruekvetter, Wellington Oil Corp.
19- 5-69 Alps, Gateway Oil Co.
23- 9-69 Waverly, Cons. Oil Fields.
32-10-68 SE, Imperial Oil Co.
25- 8-68 NE, American Pet. Corp.
24- 9-69 Hanna, Wellington Oil Co.
6- 7-68 NE, Bonner Oil Co.
17-17-64 NW, Peerless Oil Corp.
30- 4-68 NW, Panuco Exploration.
4-45-16 NW, Gilmore Oil Co.
24- 2-103 Rigby, Midwest Refg. Co.
Rigs, 14; wells drilling, 101; total, 115.

UTAH

Rigs

18-23-21 Metropole Oil Co.
4-22-19 Crescent Dome Pet.
8-28-22 Utah Oil Dev.

Wells Drilling

31- 9- 8 Utah Pet. Co.
19- 9- 8 E. J. Raddatz.
27-41-19 Utah Southern Oil Co.
35-21-16 Culbertson, Marland Oil Co.
36-26-20 Shaffer, Midwest Rfg. Co. 2.
19-22-21 Utah O. & R. Co.
36-40-90 Utah O. & R. Co. 2.
31-43-10 Utah O. & R. Co. 3.
Rosell Dist., Lakeside Oil Co.
16- 2- 5 State, Western Empire Oil Co.
32-42-17 Monroe Oil Co.
Diamond Fork, Gustaven Oil Co.
7-21-19 SW, Stanburg Pet. Co.
23- 3-24 Clay Basin, Prod. & Refs. 2.
12-19-13 Utah O. & R.
17-27-20 Shaffer, Midwest Rfg. Co.
23-14-92 Mt. States Pet. Co.
27-21-19 Western States Dev. Co.
4-19-25 Chas. Orchard et al.

Shut Down

2-21-20 L. L. Travis.
21-22-22 Hope Synd.
6-14-13 San Juan Dev. Co.
23-42-17 Monumental Oil Co.
12-19-13 Ute Pet. & Utah Southern.
13- 4-16 Castle Dale Oil Co.
27-16- 4 Producers Oil Co.
Lakeside Dome, W. R. Holmes.
Diamond Fork, Franko Utah Oil Co.
34-25-21 NW, Big Six Oil Co.
25-13-13 Utah Central Oil.
Rigs, 3; wells drilling, 32; total, 35.

NEW MEXICO

Rigs

8-18-28 New State, Ohio Oil Co. 2.
5-17-32 Mitchell, Maljamar O. & G.
3-17-32 Pearsall, Maljamar O. & G.
13-18-32 McDonald & Jewett, Maljamar O. & G.
19-36-34 SW, Sinclair & Fenton.
15-21-33 NW, Covert et al.
19-16-34 SW, Crescent Eagle Oil Co.
17-31- 8 Huntington Park Oil Co.
18-18-28 SW, Danciger-Beeson 2.
10- 4-28 NW, Oliver Well.
5-18-28 State, Lever et al.
36- 1-21 Ingram, Navajo Oil Co.
27-19-28 Mescatero Pet. Co.

Wells Drilling

28-18-28 NE, Flynn, Welch & Yates 46.
28-18-28 Flynn, Welch & Yates 47.
21-18-28 Flynn, Welch & Yates 48.
21-18-28 NE, Flynn, Welch & Yates 4.
32- 4- 6 McDonald, Ohio Oil Co. 1.
30-20-10 Benedum & Trees.
35-17-27 SW, Empire G. & F. Co.
8-18-28 State, Texas Prod. Co. 5.
3-18-28 SW, Levers & Carper 3.
29-10-10 Duke City Pet. Co.
27-17-16 Chebeque Synd.
4-22-19 Crescent Eagle Oil Co.
22-25-21 Embar Oil Co.
8-26-18 Tocito, Continental Oil Co.
29-17-28 Wilson, Texas Prod. Co.
21-17-32 Baish, Maljamar O. & G. Co.
15-17-32 Beardsley, Maljamar O. & G. Co.
5-18-32 Walker, Maljamar O. & G. Co.
1-18-32 Stroup, Maljamar O. & G. Co.
3-13-15 Santa Fe Pet. Co.
21-18-28 SE, Flynn, Welch & Yates 45.
5-17-28 SE, New Mexico Oil Co.
17-17-28 SW, Texas Prod. Co. 1.
8-26-18 Navajo, Continental Oil Co.
12-30-10 SE, Miley Oil Co.
18- 7-21 Ventura Pet. Co.
19-27-17 Table Mesa, Continental Oil Co. 7.
29-17-28 Texas Prod. Co.
17-17-28 Bobbs, Texas Prod. Co.
3-18-27 Mann, Compton 2.
16-18-28 Compton, Hasenfuss, Lewellyn.
15-18-28 Wians, Harris & Rehn.
15-11-26 Purcell, Rodgers et al.
30-20-10 Pittsburg Oil Dev. Co.
29- 1-21 Steel-Rhinesmith.
17-18-28 SW, Cummins 3.
4-18-28 SE, Pueblo Oil Co.
14-15-17 NW, Arkansas Fuel Co.
20-29-11 NE, West Coast Gaso Co.
4-21-27 Olson, M. M. Miller.
15-29-11 Bloomfield O. & G.
15-23-24 California Co.
3-12-29 Bell, Marland Oil Co.
24- 8-23 SE, Lewis et al.
16-29-11 SE, C. S. Ringle.
34-29-11 C. S. Ringle.
4-21-30 SW, Van Cleve and Kronen 2, 3.
24-10-27 NW, R. C. Christman.
24-21-15 W. R. Childers.
8- 2-14 Simmons et al.
10- 3-17 Transport Oil Co.
17-18-28 NW, W. G. Hurst.
9-10-28 SW, Danciger Bros.
33-17-20 SW, Wooley-Jones.
1-17- 9 Welch et al.
3-21- 2 Williams et al.
15-29-11 Butler-Stonacher Synd.
7-13-10 NW, Wood et al.
19-21-19 NE, F. A. Black Drlg. Co.
25-17-26 Patterson & Stumpf.
15-15-29 Southern Exploration Co.
4-18-28 SE, Fite No. 1.
8-16-27 Campbell, Colo. G. & F. Co.
25-11-26 SW, N. Jones.
7-18- 1 La Ventana Oil Co.
22-19-27 NW, Valley Oil Corp.
8-16-27 SE, Colorado Drlg. Co.
8-31-21 NE, Owens-Albuquerque.
8- 6- 1 NW, DeChaves Pet. Co.
2-29-19 Continental Oil Co. 17.
18-18-28 SE, Danciger-Beeson 1.
9-18-28 NE, Sidler Drilling Co.
1- 6-27 SW, Steel-Rhinesmith.
9- 6-34 Grady Oil Co.
11- 5-35 Frio Oil Co.
4- 2-20 Hinkle et al.
14-13-14 State Cons. Oil Co.
9-29-11 Bruce Breagle.
24-30-18 SW. Portage O. & G.
5-18-27 Brainard, Swartz, Compton, Eaton.
31-19-28 Pruitt, Ohio Oil Co.
33-18-28 NW, Snowden-McSweeney 4.
12-18-28 Pitcher O. & G.
19-18-29 Bujac-Wade-Murphy.
1- 2-32 NE, Painter et al.
29- 9-21 Steel-Rhinesmith.
34-23-21 H. D. Adders.
10-28-25 Moore, Red Feather Oil Co.
34-29-11 Garland, Congress Oil Co.
23-33-12 Pulliam, Erdman et al.
13-33-12 Murray, W. H. Hall et al.
30-30-15 Bowman, Williams et al.
12-30-12 Lannier, Anamis Oil Co.
21-18-28 Keyes, Maljamar O. & G. 4.
21-25-30 Sun Oil Co.
8-11-23 Gibson Oil Co.
25-31-18, Bertlett, Union of California 2.
16- 1-27 McAdoo, Navajo Oil Co.

Shut Down

34-14-44 SW, Meadow Oil Co.
36-11-27 SW, Buffalo-Roswell.
31- 3-15 NW, Wyo. Colo. Oil Co.
22-19-27 State, Oscar Howard.
24-29-11 Hubbell & Hall.
21-30-11 Home Gas Co.
2-19-26 Peckenbaugh, Eureka Oil Co.
1- 3-32 NE, Gurley Oil Co.
24-21-11 SE, Angelus Mining Asso.
30-13-10 SW, Wood et al.
6-29- 9 Detroit Oil Corp.
10-29-24 NW, Eureka Oil Co.
29-29-11 Montesuma Synd.
12-29-13 SW, Ship Rock Oil Co.
9-30- 9 Rainbow Oil Co.
36-20-30 Yates, Keyes et al.
11-16-27 SE, Blue Bird Oil Co.
3-22-26 NE, Blue Bird Oil Co.
16-13- 9 Melstead No. 2.
25-13-31 SE, Standard Pet. Co.
11-20-29 Rawson, William Dooley.
31-14- 9 SE. Union United Oil Co.
26-18-18 New Mexico Oil Co.
25- 7- 2 Swisher & Wallace.
31-19-28 Johnson, Ohio Oil Co.
30-28-11 New Mexico-Milwaukee Synd.
23-18-15 E. M. Treat & Co.
28-18-28 SE, Quillen & Dunnett.
15-12-23 NW, Zeppenfield Co.
16- 1- 7 NE, Fort Sumner Oil Co.
32- 7-10 SE, California Explor. Co.
33-11-35 Tilton & Croft.
23-16-29 Young, Ohio Oil Co.
8-16-27 SE, Irvine et al.
5-22-19 NE, F. A. Black Drlg. Co. 2.
Rigs, 13; wells drilling, 132; total, 145.

WYOMING

Wells Completed

24-40-79 SE, Wyoming Oil Fields 21-A 40
23-40-79 SW, Wyoming Oil Fields 16-A 35
35-40-79 NW, Wyoming Asso. 13-L ... 95
35-40-79 SE, Wyoming Asso. 15-A ... 50
26-40-79 NW, Wyoming Asso. 13-A ... 405
26-40-79 NE, Wyoming Asso. 18-A ... 20
14-40-79 SE, Wyoming Asso. 16-A ... 28
24-40-79 SE, Wyoming Asso. 16-A ... 40
22-40-79 SE, Wyoming Asso. 22-A ... 30
11-39-79 NW, Salt Creek Cons. 35-A .. 45
12-40-79 SE, Mt. and Gulf 8-A 25
13-40-79 NE, Mt. and Gulf 26-A 30
35-40-79 SW, Midwest Oil Co. 22-A .. 40
35-40-79 NE, Midwest Oil Co. 6-A ... 35
25-40-79 NE, Midwest & Wyo. Asso. 15-A 50
25-40-79 NE, Midwest & Wyo. Asso. 21-A 50
36-40-79 NE, Midwest & Wyo. Asso. 8-A 40
16-40-79 SE, Derrick Oil Co. 25 ..... dry
26-40-79 SE, Wyoming Asso. 21 5000
14-40-79 SW, Wyoming Asso. 13-A 30
26-40-79 SW, Wyoming Asso. 36-A ... 70
26-40-79 SW, Wyoming Asso. 21-A ... 80
14-40-79 NE, Midwest Oil Co. 19-A ... 35
26-40-79 SW, Midwest Oil Co. 15-A .. 60
27-40-79 SE, Midwest Oil Co. 34-A ... 30
31-40-78 NW, Salt Creek Cons. 36-A .. 50
2-40-79 SE, Wyoming Oil Fields 33-A 40
17-49-91 Frontier O. & G. ..... dry
22-48-91 SW, Olympus Oil Co. ..... dry
6-23-88 Belle Springs, Prairie O. & G. 2 ..... dry
29-26-87 Prod. & Refs. 1 ..... gas
24-26-88 Marvin Oil Co. ..... dry
17-46-63 Euclide Oil Co. 20
17-46-63 Dakoming Oil Co. 10
3-26-113 Fawcett-McPherrin 100
34-27-113 SW, Beneficial Oil Co. 6 50
24-26-62 Foreman et al ..... dry

Wells completed 37
Production 5435
Dry 8
Gas 1
Gas production 10,000,000

MONTANA

Wells Completed

Lolte Permit, California Co. .. dry
30-35- 1 Maughan, Ohio Oil Co. 9 ... 10
14-35- 2 Engemon, Ohio Oil Co. 2 .... dry
31-35- 1 Byrne, Fulton Oil Co. 14 ... 1500
2-35- 4 Medillia Drlg. Co. ..... dry
1-34- 2 Faunce, Sunburst O. & G. .... dry
28-35- 1 Levnick, Collins et al 35
24-35- 2 Byrne, Ferdig Oil Co. 7 ..... dry
34-35- 2 Lashbaugh, Ferdig Oil Co. 13 dry
30-35- 1 Stannard, Rice Oil Co. 8 25
14-35- 2 Reeg, Sunburst O. & R. 3 ... 12
13-34- 2 Morton, Liberty et al 12
31-35- 1 Allen, Big West Synd. 5
31-35- 1 Allen, Big West Oil Co. 17 .. 40
31-35- 1 Kaiser, Corey Oil Co. 3 10
32-35- 1 Caine, Fifty-Six Pet. Co. 11 . dry
22-35- 2 Helmericks, Continental Oil Co. 8 10
11-34- 3 Freemke, D. A. S. Oils ..... gas
33-35- 2 McCormick, Diamond Oil Co. 5 ..... gas
24-35- 2 Byrne, Ellis Oil Co. 3 10
7-34- 1 Wilcox, Keylon et al ..... dry
1-34- 2 Lewis, Wismont Oil Co. 1 .... gas
24-35- 2 Wait, Clara Oil Co. 3 ..... dry
19-35- 1 P. M. K. Oil Co. 35
27-35- 2 Lashbaugh, O'Neill Bros. 1600
30-35- 1 Stannard, Rice Oil Co. 9 200
31-35- 1 Byrne, Fulton Oil Co. 15 50
4-34- 2 Norem, Bi-State Oil Co. 20
30-35- 1 Stannard, Rice Oil Co. 10 .. 1000
16-35- 3 Goddertz, Arranow ..... dry
4-34- 2 Corey, Johnson Signal Hill 9 . dry
17-34- 2 DeGroat, Wenowah Synd 2 .. dry
17-34- 1 Larson, Pondera Valley Oil Co. 100
31-35- 1 Emmons, Dakota Montana 12 . 40
32-35- 1 Caine, Fifty-Six Pet. Co. 13.. 25
25-35- 2 Stannard, Wyomont Oil Co. 8 25
35-35- 2 Byrne, Monger & Barr 3 20
31-35- 1 Emmons, Dakota Montana 10. 75
1-34- 2 Steele, Didsbury Synd. ..... dry
25-35- 2 Byrne, Dominion Oils 2 ..... dry
35-35- 2 Abell, Ferdig Oil Co. 7 ..... dry
32-35- 1 Putnam, Kewanee 7 ..... dry
30-35- 1 Stannard, Rice Oil Co. 11 ... dry
9-35- 2 Howling, Mid Northern 10 .. dry
20-13- 2 NW, Moscow-Idaho Oil Co. .. dry
26- 1-21 Moddrell, Leonard Oil Co. .. dry
18-30- 3 Kelley, G. N. Producers ..... dry

Wells completed 47
Production 4839
Dry 21
Gas 3

COLORADO

Wells Completed

30- 2-102 Emerald, Texas Prod. Co. .. gas
32-10-68 Hess, Union Oil of California dry
36-10-69 State, Union Oil of California dry
4-20-69 Continental Oil Co. 40
21- 3-91 Clark, Marland Oil Co. ..... gas
17-17-64 Christy Oil Co. ..... dry
36- 7-103 Smith, Midwest Rfg. Co. ..... dry
10-29-69 SW, Panuco Explor. Co. .... gas
17- 8-68 Daisy King, Carter Oil Co. .. dry
4-20-69 Continental Oil Co. 570 30
21-20-69 SW, Continental Oil Co. 565 . 20
8- 6-86 Belle Dennis, Texas Prod. Co. dry
10- 4-91 Knowlton, Texas Prod. Co. 7. 600

Wells completed 13
Production 690
Dry 6
Gas 2
Gas production 150,000,000

NEW MEXICO

Wells Completed

5-19-28 SW, Fletcher et al 10
19-20-20 SE, W. C. Wells & Sons .... dry
21-14-15 SE, Blackstone Champion ... dry
23-18-11 Pan Mex Dumas ..... dry
19-30-11 Clark, Mexahoma Oil Co. 20
9-13-34 McGee, Olean Oil Co. ..... dry
5- 8-23 Peerless Oil Co. ..... dry
4-18-28 New State, Ohio Oil Co. 9 ... 15
2-18-28 SE, Ramage et al 50
23-17-16 McGregor & Axul Synd. ..... dry
21-18-28 Flynn, Welch & Yates 39 100
9-13-34 Prairie O. & G. ..... dry

Wells completed 12
Production 195
Dry 7

EASTERN FIELDS

Summary of Wells Completed

Field—	Comp.	Pro.	1. Dry	Gas
Allegany	28	48	0	0
Bradford	151	338	0	0
Middle Field	14	15	1	1
Venango-Clarion	44	36	6	6
Butler-Armstrong	17	23	6	2
Southwest Pennsylvania	11	18	5	1
West Virginia	72	480	8	30
Southeast Ohio	89	805	15	15
Total June	426	1,763	41	55
Total May	382	2,339	38	74
Difference	44	476	3	19

Rigs and Wells Drilling

Field—	Rigs	Drg.	Ttl.
Allegany	16	23	39
Bradford	20	120	140
Middle Field	0	3	3
Venango-Clarion	4	20	24
Butler Armstrong	9	13	22
Southwest Pennsylvania	5	45	50
West Virginia	49	152	201
Southeast Ohio	27	127	154
Total June 30	170	503	673
Total May 31	175	439	614
Difference	45	64	19

WELLS COMPLETED ALLEGANY FIELD

Dean, S. & A. Austin 1
Heseltine, Atwood & Stebbins 1
Taylor, W. A. Dusenbury et al 2
Fee, Empire Gas & Fuel, Ltd 1
Fee, C. M. Barnes et al 2
Fee, McKean Natural Gas 3
Herrick, E. C. Carthwait et al 1
Fee, Empire Gas & Fuel, Ltd. ..... wtr
Fee, Albert Oil ..... wtr
Fee, Phillips & Howard ..... wtr
Reid, agent, Cuba National Bank and Randall 5
Fee, Empire Gas & Fuel, Ltd. 2
Beatry & Horton, Sawyer & Jennings... 1
Burdick, B. A. Vossler et al 1
South Penn Oil, A. D. Reeland et al.... 1
Fee, Martin Bros. and Sawyer 3
Perkins, W. H. Lobough, Tr. 3
Fee, F. W. Fornesa Jr. 2
Fee, C. H. Lavens Estate et al 2
Kinley Oil, W. J. Weller et al 1
Fee, L. A. Wilson 1
Fee, C. W. Mead 2
McDermott, Wilbart Oil 2
Coast et al, M. J. Crowley et al 2
Coast et al, James McMillan 1
Fee, Gilligan & McDermott 5
McDivitt, E. J. Phillips et al 1
Fee, Hazelwood Oil 2

Wells completed 28
Production 48
Water 2

BRADFORD

Windsor, Wilson & Co. 12 1
Riddell Estate, South Penn Oil 53..... 4
Rounds & Lawrence, South Penn Oil 54.. 10
Fee, Stover & Hannon 11 4
Burns et al, Bliss Oil 31 1
Fee, M. C. Roat 14 2
Fee, W. E. & W. W. Parmeter 31 2
Fee, M. C. Reidy 14 2
Bing et al, B. P. Brown et al 2
Fee, F. M. Johnston & Son 21 3
Franchot, Simon & Cotton 12 5
Fee, Hazelwood Oil 47 ..... wtr
Fee, Hooker et al 6 ..... wtr
Fee, T. B. Wilson 9 9
Fee, H. Kennedy 18 1
Franchot, Maxwell Bros. 16 2
Fee, Mary J. Franks 5 3
Franchot, W. J. Oliver 20 4
Franchot, Melvin & Towne 8 5
Fee, C. B. Kervin 2
Fee, Forest Oil, Inc. 3
Fee, South Penn Oil 1
Quintuple Oil, Mrs. Elizabeth Gildersleeve 3
Bing, Hazelwood Oil 41 3
Fee, Kaber & Kaber 35 1
Bing, 150, South Penn Oil 66 3
Fee, South Penn Oil 34 4
Fee, South Penn Oil 41 2
Bing, 151-154, South Penn Oil 29 2
Dent Fee, South Penn Oil 102 5
Fee, Barry Estate 1
Brown, Hungiville et al 2
Fee, Hilliard & Dodge 19 2
Fee, W. N. Hunter et al 22 2
Hallenbeck & Minster, W. M. Jackson et al 2
Fee, Roy E. Diament 14 4
Kennedy & Clarke, Phoenix Oil 161.... 1
Kinzua fee, South Penn Oil 186 4
Bing, 188, Harris Oil 31 10
Fee, A. Stover 2
Fee, T. H. Kennedy No. 6 2
Fee, T. H. Kennedy No. 6 2
Bing, 482, South Penn Oil 25 5
Bing, 408, South Penn Oil 16 5
Bing, 439, South Penn Oil 98 2
Bing, 425, Grant & Mohan 10 3
Bing, 370, Hazelwood Oil 71 2
Bing, 570, South Penn Oil 112 6
Bing, 404, South Penn Oil 51 6
Bing, 494, South Penn Oil 52 8
Bing, 533, South Penn Oil 82 1
Bing, 581, Associated Prod. 366 6
Lawton, Gallup, Elder et al 25 2
Bing, 321, Andrus & McDowell 71 2
Bing, 296, Andrus & McDowell 103 2
Rew, Bovaird & Hamlin 14 2
Bing, 490, T. H. Kennedy No. 2, 139 ... 2
Bing, 430, Lane No. 1 et al 70..... 2
Bing, 388, C. L. Wann et al 50 1
Bing, 389, D. W. Daly 42 1
Duke, Gridiron Oil 3
Duke, Gridiron Oil 3
Morse, Jos. Minnich Est. ..... wtr
Hanes, Coast & Storms ..... wtr
Borden, T. P. Thompson ..... wtr
Borden, T. P. Thompson 1
Fee, J. H. Hifler 2
Meldrum, Wiborg & Co. 8
Meldrum, Wiborg & Co. 1
Howard, Pressure Oil 2
Jones, South Penn Oil 2

XUM

Jones, South Penn Oil 2
Jones, South Penn Oil 3
Jones, South Penn Oil 3
Borden, T. B. Wilson 5
Borden, T. B. Wilson ..... wtr
Kervin, Minnich Bros. 3
Mott, Reclamation Oil 3
Mott, Reclamation Oil 3
Mott, Reclamation Oil 3
Baldwin, C. B. Kervin 3
Keating, Sloan & Zook 3
Keating, Sloan & Zook 3
Kapp, T. H. Kervin, Jr. 2
Russell, Potter & DeVore 3
Keating, J. B. Randall 2
Borden, A. J. Douglas et al 1
Burns, A. J. Douglas et al 2
Baldwin, Forest Oil 4
Baldwin, Forest Oil 4
Porter, Forest Oil 4
Porter, Forest Oil 4
Taggart, Juetter Bros. & Mitchell 3
Shenfield, W. J. Fredericks 4
Burns, Burns Bros. 2
D. C. & B., George & Kervin 3
Sanderson, A. Schorman 3
Sanderson, A. Schorman 3
Duke, M. B. Oil 15
Duke, M. B. Oil 5
Duke, M. B. Oil 1 1
Duke, M. B. Oil 3
Duke, M. B. Oil 1 1
Duke, M. B. Oil (24 wells) ..... wtr
Hodge, South Penn Oil 1
Sill, Hope Oil 2
Sill, Hope Oil 2
Pratt, Petroleum Reclamation 1
Pratt, Petroleum Reclamation 1
Pratt, Petroleum Reclamation 2
Ekas, Lloyd & Piper 2
Ekas, Lloyd & Piper 1
Ekas, Lloyd & Piper 2
Whipple, South Penn Oil 1
Enterprise, South Penn Oil 3
Taylor, M. E. Jones 2
Rew, F. D. Gallup et al 3
Monroe, DeVore et al 1
Fee, W. J. Healy & Co. 2
George, Nesselson Bros. 1
Hooker, Hyde & Becker 1
Wright, Wright & Johnson 2
Emerson, G. L. Rhodes et al 2
Bingham, J. L. Yerdon 1
Bingham, J. L. Yerdon 2
Elder, S. H. Elder & Co. 1
Bingham, H. E. Camp Est. 3
Wright, E. H. & Retta Culbertson 4

Wells completed 151
Production 388
Water 30

MIDDLE FIELD

Lot 410, Wm. Harley 6 2
Osten, Rembold & Co. 4 2
Osten, Rembold & Co. 5 1
O'Hara, Pequignot & Barnard 13 1
Tuttle, F. R. & H. J. Jennings 11 2
T. & W., A. E. & W. C. Tompsett 75 1
Merkle, Brocklehurst & Kapp 38 1
Merkle, Brockelhurst & Kapp 39 1
Lot 426, Kane Oil 42 1
Lot 268, Pennsylvania Gas 939 ..... dry
Irvine, D. Wade 1
Smith, McCool Bros. 1
Lot 49, Lesser & Launer 1
Siggins, H. A. Siggins ..... gas

Wells completed 14
Production 15
Dry 1
Gas 1

VENANGO-CLARION

Shoup, Ginter & Co. 2 ..... dry
Lewis, Friggle Bros. 58 1
Lewis, Friggle Bros. 59 1
Hovis, Peoples National Bank of Clintonville 11 1
McNellie, Midland Oil Corp. 9 1
McNellie, Midland Oil Corp. 10 1
McNellie, Midland Oil Corp. 11 1
McNellie, Midland Oil Corp. 12 1
McNellie, Midland Oil Corp. 13 1
McNellie, Midland Oil Corp. 14 1
McNellie, Midland Oil Corp. 15 1
McNellie, Midland Oil Corp. 16 1
McNellie, Midland Oil Corp. 17 1
Kern, C. B. Kern 15 1
Shreve, A. P. & C. V. Warner 11 1
Rice, Jacob Sheasley 5 ..... dry
Rice, Jacob Sheasley 6 1
Moses, S. P. McCalmont 14 1
Bighfield, D. & E. E. Grimm 11 1
P. C. L. & P. Co., Pyle, Price et al 64 1
P. C. L. & P. Co., Pyle, Price et al 65 1
Hasson, Ed Siederman 51 ..... abd
Hasson, Ed Siederman 52 1
Adams, Adams & Green 13 1
Myers, Craig, Hoffman et al 13 2
Knapp & Preston, Nickle & O'Brien 3 1
Shaffer & Myers, Oil City Nat. Bank 3 1
Roess, Brutsche & Turk, Smith, Brutsche
Hughes, C. A. Hughes 2 2
Gormley, D. F. Manion 11 1
Gormley, D. F. Manion 12 1
Hoffman, Hawkins & Monjar 30 1
Kimes, Donaldson, McDowell et al 3 1
Crawford & Gregory, Oil Well Sup. 111 ..... dry
Kapp, Kapp Bros. 1 ..... gas
Clarion—
Kapp, Alum Rock Gas 1 ..... dry
Kapp, United Natural Gas 1 ..... gas
Kapp, United Natural Gas 2 ..... gas
Beichner, S. R. Lewis et al 1 ..... gas
Kapp, Alum Rock Gas 1 ..... dry
O'Neill Bros., D. & H. O'Neill 7 3
Knox, H. W. Wilson 1 ..... gas
Kribbs, Wentling, Kribbs et al 3 ..... dry
Walter, Phillips & Co. 1 ..... gas
Mercer—
Perrine, L. F. Perrine 15 1

Wells completed 44
Production 36
Dry 5
Gas 6
Abandoned 1

BUTLER-ARMSTRONG

McKee, McKee 9 5
Stewart & Co., Stewart & Co. 1 3
Anderson, Crawford & Gregory 16 5
McKinney, G. F. Hovis et al 5 2
Jack, Sherwin & Burns 1 ..... dry
Corso, Black & Parker 1
Donaldson, W. Berry et al 1 1
Rudert, Frederick & Co. 1 ..... gas
Logan heirs, Battenfelder & Co. 1 ..... dry
Lefever & Bruner, Lefever & Co. 1 ..... dry
Pontius, Westerman, Pontius & Co. 6 2
Kennell, Waltman, Hilderbrand & Co. 1 1
Denny, Denny & Co. 1 ..... dry
Kramer, Southern Oil 5 ..... dry
McCague, Lang & Co. 1 2
Vensel, Ritzert Bros. & Co. 1 ..... gas
Orphans' Home School, Dambaugh & Eichholtz 1 ..... dry
Hockenberry, Armstrong & Ruby 3 1

Wells completed 17
Dry 6
Gas 2

ALLEGANY FIELD
Rigs

Fee, McKean Natural Gas.
Herrick, E. C. Garthwait et al.
Fee, C. M. Barnes et al.
Fee, Empire Gas & Fuel, Ltd.
Fee, Albert Oil.
Fee, J. E. LeSuer et al.
South Penn Oil, A. D. Reeland et al.
Congdon, First National Bank of Cuba.
Perkins, W. H. Lobough, Tr.
South Penn Oil et al, Empire G. & F., Ltd.
Coast et al, M. J. Crowley et al.
Fee, L. A. Wilson.
Crandall, Wightman & Crandall.
Fee, Gilligan & Dermitt.
Fee, C. W. Mead.
Fee, A. L. & L. N. Shaner.
Wells Drilling
Heseltine, Atwood & Stebbins.
Dean, S. & A. Austin.
Clark, L. E. Norton et al.
Fee, Empire Gas & Fuel, Ltd.
Fee, Herrick & Wilbur.
Morse, McKean Natural Gas.
Taylor, W. A. Duesenbury et al.
Fee, Phillips & Howard.
Fee, State Bank of Bolivar 28, 29.
Fee, Albert Oil.
Fee, Empire Gas & Fuel, Ltd.
Fee, Isaac Willets Estate.
Birtcil, W. E. McMurdy et al.
Fee, C. C. Brennan et al.
Fee, F. L. Williams.
Burdick, B. A. Vossler et al.
Cass, F. J. Wilson.
Kinley Oil, W. J. Weller et al.
Fee, C. H. Lavens Estate et al.
Coast et al, M. J. Crowley et al.
Fee, M. J. Crowley et al.
Fee, Hazelwood Oil.
McDivitt, E. J. Phillips et al.
Rigs, 16; wells drilling, 23: total, 39.

BRADFORD FIELD
Rigs

Bing, 490, T. H. Kennedy & Co. No. 2, 141.
Burns et al, Kramf & McCandless 20.
Fee, F. M. Johnston & Son 22.
Franchot, Melvin & Towne 9.
Fee, Forest Oil, Inc.
Bing, 150, South Penn Oil 68, 67.
Fee, Kaber & Kaber 36.
Fee, South Penn Oil 35.
Fee, Hilliard & Dodge 20.
Fee, W. N. Hunter et al 33.
Kinzua fee, South Penn Oil 187.
Kennedy & Clarke, Phoenix Oil 162.
Bing, 425, Grant & Mohan 11.
Bing, 408, South Penn Oil 17.
Bing, 568, Associated Producers 374.
Bing, 494, South Penn Oil 53, 54.
Bing, 533, South Penn Oil 83.
Bingham, H. E. Camp Est.
Wells Drilling
Rounds & Lawrence, South Penn Oil 55.
Weston, Jr., Tr., South Penn Oil 93.
Redfield et al, South Penn Oil 105.
Bing et al, B. P. Brown et al 9.
Fee, T. H. Given 12.
Fee, E. L. & F. J. Shippey 11.
Franchot, Simon & Cotton 12.
Franchot, F. M. Johnston & Son 24.
Fee, L. G. Dana 20.
Fee, Hazelwood Oil 47.
Fee, Hooker et al 6.
Franchot, Penn Brook Oil 19.
Fee, T. B. Wilson 10.
Franchot, Maxwell Bros. 17.
Franchot, W. J. Oliver 20.
Fee, T. H. Kennedy 19.
Fee, South Penn Oil.
Fee, C. B. Kervin.
Fee, South Penn Oil.
Bing, Hazelwood Oil 119.
Bing, Hazelwood Oil 122.
Bing, Hazelwood Oil 123.
Grimm, J. W. Abrams 3.
Fee, W. T. Kennedy Co. 53.
Bing, 151, South Penn Oil 30.
Dent fee, South Penn Oil 103.
Hallenbeck & Minister, W. M. Jackson et al.
Miller, Bouton & Snyder.
Bing, 188, Harris Oil 32.
Fee, A. Stover.
Fee, R. O. Landers et al.
Bing, 399, South Penn Oil.
Bing, 427, Scofield & White.
Bing, 440, South Penn Oil & Hazelwood 15.
Bing, 439, South Penn Oil 99.
Bing, 410, South Penn Oil 38.
Bing, 370, Hazelwood Oil 72.
Bing, 501, South Penn Oil 16.
Bing, 439, South Penn Oil.
Bing, 582, Associated Producers 372.
Bing, 590, P. A. Oakes & Sons 24.
Bing-Satt, 576, South Penn Oil 111.
Rew, Bovaird & Hamlin 15.
Vincent heirs, S. H. Elder et al 17.
Moore, Pure Penn Oil, Inc., 10.
Bing, 391, George W. Bovaird 82.
Bing, 388, C. L. Wann et al 51.
Bing, 389, D. W. Daly 43.
Bing, 401, J. E. Ward 15.
Bing, 431, J. A. Hooper 6.
Bing, 380, Wilson & Fitzgibbon 80.
Bing, 500, Daily & Healy 30.
Bing, 490, T. H. Kennedy No. 2, 140.
Bing, 369, D. W. Daly 57.
Bing, 497, Park & Bovaird 37.
Duke, Gridiron Oil (two wells.)
Morse, Jos. Minnich Est.
Hanes, Coast & Storms.
Borden, T. P. Thompson.
Fee, J. H. Hifler.
Meldrum, Wiborg & Co.
Howard, Pressure Oil.
Borden, Pressure Oil.
Jones, South Penn Oil (two wells.)
Borden, T. B. Wilson.
Mott, Reclamation Oil (three wells.)
Baldwin, C. B. Kervin.
Keating, Sloan & Zook (two wells.)
Kapp, T. H. Kervin, Jr.
Russell, Potter & DeVore.
Keating, J. B. Randall.
Borden, A. J. Douglas et al.
Burns, A. J. Douglas et al.
Baldwin, Forest Oil (two wells.)
Porter, Forest Oil (two wells.)
Taggart, Jeutter Bros. & Mitchell.
Shenfield, W. J. Fredericks.
Sanderson, A. Schorman.
Borden, John Franks.
Duke, M. B. Oil (13 wells.)
Sill, Hope Oil (two wells.)
Pratt, Petroleum Reclamation (three wells.)
Ekas, Lloyd & Piper (three wells.)
Whipple, South Penn Oil.
Enterprise, South Penn Oil.
Rew, F. D. Gallup et al (two wells.)
Monroe, DeVore et al.
Fee, W. J. Healy & Co.
Fisher, M. E. Jones.
Fee, B. Devlin.
Bingham, H. B. Oil.
Pratt, Korner Bros.
Bingham, Paul Evans et al.
Elder, S. H. Elder & Co.
Bingham, J. L. Yerdon.
Rigs, 20; wells drilling, 120; total, 140.

MIDDLE FIELD
Wells Drilling

King, E. Pequignot 14.
Ulf, Fidelity Poileum 1.
Rogers, F. H. Trax.
Wells drilling, 3.

VENANGO-CLARION
Rigs

Clarion—
Shawkey, Alum Rock Gas 1.
Kapp, Alum Rick Gas 2.
Marshall, Agnew & Co. 1.
Farmington Township, Phillips & Co. 1.
Wells Drilling
Blair, Reeves & Franklin Trust 46.
McNellie, Midland Oil Corp. 18, 19.
Craig, Fritz, Craig et al 1.
Murphy, Taylor & Torrey, L. J. Kirkwood 24.
Bowman, National Petroleum 1.
Crawford, Crawford, Gregory, Woodburn Acct. & Co. 78.
Frampton, Oil City National Bank 11.
Friedhaber, Parsons & McIntyre 18.
Cross, H. J. Hoffman 17.
McKee, C. L. Irwin 41.
Plumer, Eakin & Hutchison 44.
Donaldson, Donaldson, McDowell et al 6.
Baun, J. P. Mansfield 8.
Clarion—
Black, W. A. Jeanerat 3.
Wentling, H. E. Rugh 4.
Campbell, H. Johnson et al 1.
Garis, Alum Rock Gas 6.
Knappenberger, Knappenberger & Thomas et al 3.
Gribel, Samuel Gribel 3.
Rigs, 4; wells drilling, 20; total, 24.

BUTLER-ARMSTRONG
Rigs

Anderson, Crawford & Gregory 17.
Boggs heirs, R. C. & W. V. Binkerd.
Morgan, I. N. Johns.
Griffith, E. C. Griffith.
Kriess heirs, J. E. Dufford & Co. 1.
Hoffman, Jewell & Co. 3.
Sentz, Buttenfelder & Co. 1.
Seiders, Battenfelder & Co. 1.
Peters, L. D. Berry.
Wells Drilling
Stewart & Co., Stewart & Co. 2.
Campbell, M. W. Graham et al 8.
McGarvey, Sherwin, McGarvey et al 2.
Plunkard, J. S. Walker.
Wagner heirs, E. C. Hatcher & Co. 3.
Dulity, Boyle, Little & Co. 1.
Dewel Est., Dewey Trust 2.
Kamerer, S. H. & O. G. Kamerer 1.
Peters, Charles Devlin 1.
Abrams, Pickard & Albaugh 4.
Stamp, Stamp & Co. 1.
McBride, McBride & Co. 4.
Worley, Shoup et al 1.
Rigs, 9; wells drilling, 13; Total, 22.

WEST VIRGINIA

Wells Completed

LEWIS COUNTY

Linger, McCall & Co. 1 ..... gas
Waugh, Phila. Oil Co. 2 ..... gas

HARRISON COUNTY

Williams, Conservation Oil Co. 2 ..... gas

MONGALIA COUNTY

Kennedy heirs, Pgh. & W. Va. G. Co. 1 ..... dry
Hess, Carnegie Gas Co. 1 ..... dry
Moore, So. P. O. Co. 1 2

WETZEL AND TYLER COUNTIES

Higgins, So. P. O. Co. 1 2
Miller, Hope C. & R. Co. 1 1

MARSHALL COUNTY

Keller, Mfrs. L. & H. Co. 6 60
Riter, Mfrs. L. & H. Co. 3 5
Mikemire, Decem Dev. Co. 1 ..... dry
Yeater, Hope C. & R. Co. 1 5

RITCHIE COUNTY

Britton, Carnegie Gas Co. 3 2
Smith, Auburn Oil Co. 1 ..... dry
Bush, Ohio F. O. Co. 2 10
Spiker, Mfrs. L. & H. Co. 2 ..... gas
Rodabaugh, Nay & Kintzer 2 ..... gas
Carder, Carnegie Gas Co. 10 5
Wilson, W. R. Hays 1 ..... gas
W. Va. Tract, Wiles & Co. 22 3
W. Va. Tract, Williams & Co. 32 ..... dry
Anderson, Big Sand Oil Co. 1 ..... gas
R. Mitchell, Rinehart & Co. 2 50
Adams, Raew Bros. 4 3
D. Mitchell, Rinehart & Co. 2 20
Markle, Phila. Oil Co. 1 ..... gas

GILMER COUNTY

Reynolds, Hope C. & R. Co. 1 ..... gas
Wright, McCall & Co. 2 ..... dry

WIRT COUNTY

Eagle, J. S. Wilson 7 1
Rathbone Tract, Roberts Bros. 145 1

WOOD COUNTY

McAtee, O. C. Grow 7 2
Grant, So. P. O. Co. 18 5

PLEASANTS COUNTY

Flesher, McCleary & Co. 1 ..... dry
Wagner, Albert Neely 1 ..... dry
Gale heirs, Samuels & Gale 11 6
Cumberlidge, Albert Neely 1 ..... gas
Ambler, Bailey Gas Co. 4 2

ROANE COUNTY

Nichols, So. P. O. Co. 1 ..... gas
Dixon, Green C'k O. & G. Co 1 ..... gas
Connelly, Heck Oil Co. 8 30
Brown, Heck Oil Co. 5 8
Seaman, Ohio F. O. Co. 1 ..... gas

CALHOUN COUNTY

Close, Hope C. & R. Co. 1 5
Blake, Hope N. G. Co. 1 ..... gas
Stump, Hope N. G. Co. 1 ..... gas
Simmers, White Pine O. & G. Co. 1 4
Stalnaker, Phila. Oil Co. 3 20

CLAY COUNTY

Stockly, So. P. O. Co. 22 30
Kyle, So. P. O. Co. 4 35
Kyle, So. P. P. Co. 7 30
Belcher, So. P. O. Co. 2 35
Belcher, So. P. O. Co. 5 25
Brown, Goshorn & Co. Virginian G. & O. Co. 7 35
Brown, Goshorn & Co. Virginian G. & O. Co. 9 25
Brown Goshorn & Geary, Virginian G. & O. Co. 10 10
Young, Empire Pet. Co. 2 ..... gas

LINCOLN COUNTY

Cooper, Union Gas Co. 1 ..... gas
Lovejoy, Col. G. & E. Co. 1 ..... gas
R. Lovejoy, Col. G. & E. Co. 1 ..... gas
Sias, Roy & McComas 1 ..... gas
Lockwood, Ray Gas Co. 2 ..... gas
Lucas, Maul Rock O. & G. Co. 2 ..... gas
Lawson, Laurel Dev. Co. 1 ..... gas
Harris, Cambridge Gas Co. 1 ..... gas
H. C. L. & M. Co. Cambridge Gas Co. 1 ..... gas
Linville, Cambridge Gas Co. 4 ..... gas
Weatheral 1, So. P. O. Co. 1 ..... gas
Hill, Downing Gas Co. 1 ..... gas
Thermas, Sovereign Gas Co. 2 ..... gas

KANAWHA COUNTY

Robertson-Taylor, U. F. G. Co. 1 ..... gas

PUTNAM COUNTY

Eggleston, Teays Prod. Co. 1 ..... dry

MINGO COUNTY

Closterman Est., Old Colony O. Co. 9 3

Wells completed 72
Production 480
Dry 8
Gas 30

LEWIS COUNTY
Rigs

Wells, Carnegie Gas Co. 2.
Brinkley, Pittsburgh & West Virginia Gas Co. 1.
Davisson, Mud Lick O. & G. Co. 1.
Smith, Smith & Co. 1.
Wells Drilling
Malley, Hope Gas Co. 1.

HARRISON COUNTY
Wells Drilling

Martin, Hope Gas Co. 1.
Williams, Johnson & Co. 1.
Flint heirs, Southern Oil Co. 4.
Smith Bros, Reserve Gas Co. 1.
Reynolds, Reserve Gas Co. 3.
Tittroe, S. L. Horner 1.
Davisson, Vesper O. & G. Co. 2.
Shepler, Vesper O. & G. Co. 1.
Lewis, Hope Gas Co. 1.
Payne, Hope Gas Co. 1.
Stone, Hope Gas Co. 1.
McQuarter, Hope Gas Co. 1.
Brown, Tomahawk Oil Co. 1.

MARION COUNTY
Rig

Amos, Hope Gas Co. 1.
Wells Drilling
Toothman, Owens B. & M. Co. 1.
Thorn, Owens B. & M. Co. 1.
S. C. Thorn, Carnegie Gas Co. 1.
Hibbs, S. N. Elliott 3.

MONONGALIA COUNTY
Rigs

Hennen, Mfrs. L. & H. Co. 1.
White heirs, Mfrs. L. & H. Co. 4.
Wright, Carnegie Gas Co. 1.
Wells Drilling
Tennant, Pgh. & W. Va. Gas Co. 1.
Bell, Pgh. & W. Va. Gas Co. 2.
Eakin, Pgh. & W. Va. Gas Co. 2.
Shuman, Phila. Oil Co. 4.

WETZEL AND TYLER COUNTIES
Rigs

Wade, Carnegie Gas Co. 3.
Eddy, McIntyre Bros. 1.
Yeater heirs, Mfrs. L. & H. Co. 1.
Cornell, Aker Oil Dev. Co. 1.
Rice, Albert Neely 1.
McGinnis, H. L. Lambert 8.
Wells Drilling
Antill, John Gas Co. 7.
Peterson, John Gas Co. 6.
Fox, Mfrs. L. & H. Co. 1.
Riter, Hope C. & R. Co.
Kuhens, Hope C. & R. Co. 1.
Wade, Carnegie Gas Co. 1.
Stump, Mfrs. L. & H. Co. 3.
Hostuttler, Mfrs. L. & H. Co. 2.
Teagarden, Carnegie Gas Co. 2.
Williams heirs, Orndoff & Co. 4.
Jackson, Hope C. & R. Co. 1.
Carney, Hope C. & R. Co. 1.
O'Neill, Local Co. 1.
Virden, Cameron O. & G. Co. 1.
Tuttle, Hope C. & R. Co. 7.

MARSHALL COUNTY
Rigs

Campbell, Conway & Co. 1.
Jochum, Spider O. & G. Co. 1.
Thomas heirs, Mfrs. L. & H. Co. 3.
Teagarden, Mfrs. L. & H. Co. 2.
Wells Drilling
Riter, Mfrs. L. & H. Co. 1.
Boner, Decem Dev. Co. 6.
T. Conway, Carnegie Gas Co. 6, 7.
Rusa, Hicks O. & G. Co. 1.
Rogerson, Wasmuth & Callahan 1.
Newman, Wood & Co. 1.
Howard heirs, G. B. Patterson 1.
Baker, Decem Dev. Co. 1.

DODDRIDGE COUNTY
Rig

Stuttler, W. D. Gribble 1.
Wells Drilling
Ford, Buckeye Oil Co. 1.
Ford, Trainer & Travis 1.
Ross, Trainer & Travis 1.
Sutton, Carnegie Gas Co. 1.
Shrade, Norbell O. & G. Co. 4.
Pratt-Roberts, Mackbell O. & G. Co. 1.
Smith, Hope Gas Co. 2.
Smith, Clifton O. & G. Co. 2.

RITCHIE COUNTY
Rigs

Kelly, Carnegie Gas Co. 3.
Nutter, Hope Gas Co. 1.
Camden, Hope Gas Co. 1.
W. Va. Tract, Whitwood O. Co. 28.
Mason, P. H. McDonough 1.
Jamison, So. P. O. Co. 3.
Atkinson, Rinehart & Co. 1.
Maze, Amer. O. D. Co. 3.
Wells Drilling
Hodge, Hope Gas Co. 1.
Ehret, Hope Gas Co. 4.
Flesher, Mfrs. L. & H. Co. 1.
Zinn, Pgh. & W. Va. G. Co. 3, 4.
Bruffey, Taylor & Co. 1.
McCosh heirs, Wilson & Co. 1.
W. Va. Tract, Wyatt & Co. 11.
Howell, Moore & Co. 1.
Stursburg Realty Co., Astron Oil Co. 4.
Bowie heirs, Meadow Run Oil Co. 2.
Atkinson, So. P. O. Co. 4, 6.
Jamison, So. P. O. Co. 2.
Bradford, Rico O. & G. Co. 3.
Hardrick, Hardrick Farm O. Co. 2.
Mullinax Bros., Loomis & Co. 1.
Ingram, Snyder & Co. 1.

GILMER COUNTY
Rigs

Tierney, Jas Tierney 3.

Fling, Ellis & Co. 2.
Stalnaker, McCall & Co. 1.

Wells Drilling

J. Stalnaker, Phila. Oil Co. 1.

WIRT COUNTY

Wells Drilling

Dewees heirs, Southern Oil Co. 1.
Rathbone Tract, Roberts Bros 146.

UPSHUR COUNTY

Rigs

Heavner, Union Gas Co. 1.
Willfong, Edgell Oil Co. 1.

BRAXTON COUNTY

Rig

Dobbins, Pgh. & W. Va. G. Co. 1.

Wells Drilling

Miller, Ohio F. O. Co. 1.
Bennett heirs, Pgh. & W. Va. G. Co. 1.

WOOD COUNTY

Rig

Snyder, Pleasant Hill O. & G. Co. 1.

Wells Drilling

Stagg, Pinacle O. & G. Co. 1.
Richardson, So. P. O. Co. 13.
S. Grant, So. P. O. Co. 19.
E. Grant, Congdon & Woodyard 11.
Bartimus, Four S. Oil Co. 1.
Rost, White Sand Oil Co. 3.
Grant heirs, So. P. O. Co. 4.

PLEASANTS COUNTY

Wells Drilling

Graham heirs, Dividend O. & G. Co. 1.
Varner, Adam Ward 12.
Elliott, Stout & Co. 1.
Hart, Cunningham & Co. 1.

ROANE COUNTY

Rigs

Summers, Clifton O. & G. Co. 3.
Burrough, Heck Oil Co. 4.

Wells Drilling

Cottle, Heck Oil Co. 1.
Brown, Ohio Fuel O. Co. 2.
Young, Suter & Co. 1.
Adoms, Douglass Bros. 2.
Webb, G. L. Cabot 1.
Harless, G. L. Cabot 2.

CALHOUN COUNTY

Rigs

Richards, Chemical O. & G. Co. 1.

Wells Drilling

Wolverton, W. H. Bickel 1.
Board, Euclid O. & G. Co. 3.
Parsons, Hope Gas Co. 2.
Stump heirs, W. H. & L. Bickel 1.

MASON COUNTY

Rig

McMillan, Ohio F. O. Co. 2.

CLAY COUNTY

Rigs

Stockly, So. P. O. Co. 23, 24, 30.
Kyle, So. P. O. Co. 9, 10.
School Lot, Morley O. & G. Co. 1.
Osborne, Empire Pet. Co. 2.

Wells Drilling

Stockley, So. P. O. Co. 23, 26, 27, 28.
Kyle, So. P. O. Co. 2, 3, 8.
Belcher, So. P. O. Co. 4, 6, 7.
Parker, So. P. O. Co. 1.
Church Lot, Reed & Stephenson 1.
Casto, Ohio F. O. Co. 10.
Casto 260 acres, Virginian G. & O. Co. 13.
Brown, Goshorn & Co. Virginian G. & O. Co. 5.
Brown, Goshorn & Co., Virginian G. & O. Co. 14.
Samples, Eastern Carbon Black Co. 2.

LINCOLN COUNTY

Rigs

Egnor, Col. G. & E. Co. 1.
Goldbarth, So. P. O. Co. 1.

Wells Drilling

Lawson, Grant Gas Co. 2.

KANAWHA COUNTY

Rig

Osborne, U. F. G. Co. 1.

Wells Drilling

Gibson, U. F. G. Co. 1.
Robson-Prichard, U. F. G. Co. 1.
Robson-Prichard, Roy & McComas 3.
Fogarty, U. F. G. Co. 1.
Woods, U. F. G. Co. 1.
King, U. F. G. Co. 1.
Mullin, U. F. G. Co. 1.
Young, U. F. G. Co. 1.

BOONE COUNTY

Rig

Coon, Pure Oil Co. 1.

Wells Drilling

Sheed, U. F. G. Co. 1.
L. P. & R. Tract, Pure Oil Co. 26.
L. P. & R. Tract B, Pure Oil Co. 21.
Williams Coal Co. Pure Oil Co. 227.
L. P. & R. Tract B, Pure Oil Co. 19.
Miller, Owens B. & M. Co. 1.
Little C. & L. Co., Owens B. & M. Co. 4.
Bedford, Owens B. & M. Co. 10.
Bull C'k C. & L. Co., Owens B. & M. Co. 6.
Coal River M. Co., Owens B. & M. Co. 28.
Cunningham & Co., Owens B. & M. Co. 10.
Sherman, G. L. Cabot 1.
Wilson, Cameron & Co. 1.

LOGAN COUNTY

Wells Drilling

Cole-Crane, Hope Gas Co. 3.
Cole-Crane, Zohnheimer & Gibbs 1.

PUTNAM COUNTY

Wells Drilling

Joyce, Teays Prod. Co. 1.
Pine, Kirtley & Keller 2.
Jones, Kirtley & Keller 1.

CABELL COUNTY

Wells Drilling

Reynolds, Aetna O. & G. Co. 1.
Collins, Sweetland & Co. 1.
Walton, Walton O. & G. Co. 5.
Harshbarger, Harshbarger O. & G. Co. 1.
Finley, Monickel Gas Co. 1.
Merritt, Shipe & Co. 1.
Browning, Wolf & Co. 1.
Billenwater, Meabon & Huffman 1.

MINGO COUNTY

Well Drilling

Closterman Est., Old Colony Oil Co. 12.

WAYNE COUNTY

Wells Drilling

Anderson, Old Colony Oil Co. 1.
McGee, Chartiers Oil Co. 1.

Rigs	49
Wells Drilling	152
Total	201

SOUTHWEST PENNSYLVANIA

Wells Completed

WASHINGTON COUNTY

Hathaway, Mfrs. L. & H. Co. 2 ... 5
Sedillion, Day & Bumgard 1 ... 5
Wilson heirs, Peoples Gas Co. 1 ... dry

ALLEGHENY COUNTY

Dean, McClay & Co. 1 ... 3
Kirsh heirs, Mellon & Pollock 1 ... 2
Ickley, Harbison & Co. 1 ... 3
Shannon, Sohn & Co. 1 ... gas
Dutil Tract, W. H. Say 1 ... gas

GREENE COUNTY

Longanacker, J. L. Garard 1 ... gas
Hawkins, Carnegie Gas Co. 2 ... gas
Kinney, Hamilton & Co. 1 ... gas

Wells completed	11
Production	18
Dry	5
Gas	1

WASHINGTON COUNTY

Wells Drilling

Tyler T. & P. Co., E. H. Tague & Co. 1.

ALLEGHENY COUNTY

Wells Drilling

Dean, Pinkerton & Newhart 1.
Willoughby, Pinkerton & Co.
Elliott, Elliott & Co. 1.
Wallace, Parker & Co. 4.
Casley, Robinson & Co. 0

BEAVER COUNTY

Well Drilling

Dawson, G. W. Dawson & Co. 3.

GREENE COUNTY

Rigs

Headley, So. P. O. Co. 2.
Clovis heirs, Mfrs. L. & H. Co. 4.
R. L. Clovis, Clovis & Co. 2.
Smith, Eddy & Co. 1.
Caseman, Caseman O. & G. Co. 1.

Wells Drilling

Murriner, Peoples Gas Co. 1.
J. Lemley, Fox O. & G. Co. 1.
Null, Carnegie Gas Co. 1.
Harris, Carnegie Gas Co. 1.
Wright, Carnegie Gas Co. 1.
Bowers, Carnegie Gas Co. 1.
Kennedy, Carnegie Gas Co. 1.
Wade, Carnegie Gas Co. 2.
Lantz heirs, Carnegie Gas Co. 1.
Fox, Phila. Gas Co. 1.
Williamson, Phila. Gas Co. 1.
Henderson, Federal O. & G. Co. 1.
Vance, Dunkard O. & G. Co. 1.
Sicklesmith, J. L. Garard 15.
Hennen, Mfrs. L. & H. Co. 2.
Webster, N. G. Co. of W. Va. 1.
Smith, N. G. Co. of W. Va. 5.
Chess, McCracken & Co. 1.
Grim, G. B. Patterson 1.
Hamilton, S. W. Meales & Co. 2.
Berdine, Dunn Mar O. & G. Co. 3.
Moore, Phila. Oil Co. 1.
Conklin, Phila. Oil Co. 1.
Graham, Phila. Oil Co. 1.
Graham, Phila. Oil Co. 1.
Pethtel, Phila. Oil Co. 2, 3.
Huffman, Phila. Oil Co. 2.
Jacobs & Co., Phila. Oil Co. 7.
Rutan, Consumers Fuel Co. 2.
Anderson, Consumers Fuel Co. 2.
McClellan, Carnegie Gas Co. 1.
Shape, Carnegie Gas Co. 1.
Reese, Carnegie Gas Co. 1.
J. S. Rutan, Carnegie Gas Co. 3.
Scott, Carnegie Gas Co. 3.
Tripp, Carnegie Gas Co. 1.
Phillips, Sutton & Co. 1.
W. Tripp, Black & Co. 2.
Rigs, 5; wells drilling, 45; total, 50.

SOUTHEASTERN OHIO

Wells Completed

MONROE COUNTY

Howell, Bentz Oil Co. 1 ... gas

PERRY COUNTY

Rogers Bros., Holden Est. 22 ... 5
Trimmer, Ohio F. S. Co. 7 ... 25

HOCKING COUNTY

Pierpoint, Pierpoint O. & G. Co. 2 ... 45
Harden, Ohio F. S. Co. 2 ... 45
Thomas, Griffin Prod. Co. 6 ... gas
Thomas, Griffin Prod. Co. 7 ... dry
H. V. P. Co., Chartiers Oil Co. 198 ... 10
Kachelmacher Est., Tracey Est. 21 ... 15
Chute heirs, Red Top O. & G. Co. 8 ... 15

HOLMES COUNTY

Ellsworth, Ohio Oil Co. 1 ... dry
Mohr, Ohio Oil Co. 2. ... dry
Rambacher, Ohio F. G. Co. 1 ... 5
Bell, Bell O. & G. Co. 1 ... 1
Bridges, Empire G. & F. Co. 2 ... 50
Miller, Ark. Fuel O. Co. 3 ... gas
Schorb, East Ohio Gas Co. 1 ... 20

GUERNSEY COUNTY

Speer, Ohio Oil Co. 1 ... gas
Knight, Big Lime Oil Co. 2 ... gas
McBride, Witmer Trustee 1 ... gas

LICKING COUNTY

Phillips, Hope C. & R. Co. 3 ... 105
Brown, Hope C. & R. Co. 1 ... 65
Walcutt heirs, E. H. Everett Co. 2 ... 5
Forry, Edmonds & Co. 9 ... 4
Forry, Ohio F. S. Co. 1 ... 3
Forry, Ohio F. S. Co. 2 ... 2
Harshbarger, Ohio F. S. Co. 4 ... 4
Pound, Farmer & Co. 3 ... 4
McCormick, Patton & Co. 3 ... 3
Hartman, Moore & Co. 1 ... dry
McKinney, Rugg & Co. 5 ... 15
Coomes, Soules & Co. 1 ... 110
Beckford, Ohio F. G. Co. 1 ... gas
Myers, Leonard O. & G. Co. 1 ... gas
Varner, Leonard O. & G. Co. 5 ... 4

MUSKINGUM COUNTY

Drumm, A. H. Helsey Co. 1 ... 80

COSHOCTON COUNTY

Norris, Leonard O. & G. Co. 3 ... 5

FAIRFIELD COUNTY

Ruff, Sharpnack & Co. 2 ... dry

MORGAN COUNTY

Swytser, Sun Oil Co. 18 ... 40
Steimer Est., Daily Oil Co. 1 ... 25
Pletcher, Swingle O. & G. Co. 7 ... gas
Baringer, Pure Oil Co. 12 ... 5
Fye, Pure Oil Co. 9 ... 15
Mounts, Pure Oil Co. 1 ... 10
Hilaman, Swissvale O. & G. Co. 1 ... gas
Leisure, Ruben Leisure 5 ... 1
Joy, Ohio F. S. Co. 1 ... gas
Fye, Sun Oil Co. 2 ... 3
Williams, Pure Oil Co. 2 ... 10
Epply, Ohio F. S. Co. 2 ... 5

KNOX COUNTY

Duncan, Ark. F. O. Co. 16 ... 2
Davidson, Margaret Oil Co. 5 ... 3
Richert, East Ohio P. & R. Co. 35 ... 2

NOBLE COUNTY

Misel, Hall & Co. 4 ... 1
Wagner, Hutcheson & Co. 3 ... 1
Smithson, O. O. Kinsey 11 ... 1
Watson, Ohio F. S. Co. 1 ... gas
Brown, Yerain & Co. 2 ... dry
Brown, Yerain & Co. 3 ... dry
Estadt, Sheets & Co. 3 ... dry
Harper, Wickens & Co. 6 ... 2
Boyde, Rucker & Co. 2 ... dry
Schott, Schott & Co. 2 ... dry

ATHENS COUNTY

Murphy, Southern Oil Co. 5 ... 1
Brooks, Cook & Co. 1 ... dry
Watkins, Townsend & Co. 1 ... gas
Biddle, Biddle O. & G. Co 9 ... 1
Higgins, Gross & Co. 5 ... 2
Beeghley-Shaffer, Beeghley & Shaffer 2 ... 8
Irwin, Gross & Co. 1 ... gas

MEIGS COUNTY

McBride, Clifton & Co. 3 ... 1

WASHINGTON COUNTY

Reader, Peoples Bank, trustee 44 ... 1
Greene, Patterson & Co. 6 ... 10
Epler, Beeson & Co. 1 ... 3
Trimmer, Palmer & Co. 3 ... dry
Wagner, Becker & Co. 1 ... dry
Whiston, Rose & Co. 6 ... 1
Mendenhall, Marietta Supply Co. 2 ... 1
Shackler, Heene & Co. 1 ... gas
Bell, Patterson & Co. 1 ... dry
Craven, Upener & Co. 1 ... dry
Harrison, Heintzelman & Co. 1 ... 3

JEFFERSON COUNTY

Kelly, D. E. Campbell 1 ... dry
Schroder heirs, Talbot & Co. 2 ... 1

COLUMBIANA COUNTY

Miller, McDonnell & Co. 3 ... dry

HARRISON COUNTY

Dunlap, Donaldson & Co. 2 ... 1
Moorhead, Osburn & Co. 3 ... 4

Wells completed	89
Production	805
Dry	15
Gas	15

MONROE COUNTY

Wells Drilling

Scott, Carner & Co. 4.

PERRY COUNTY

Rigs

Hocking Coal Co., Hope C. & R. Co. 3.
Allen, Leonard O. & G. Co. 1.
McCullough, Hope C. & R. Co. 17.
Melick Bros., Atha Oil Co. 21.

Wells Drilling

Rodgers, Holden & Co. 22.
Roberts, Keller Bros. 23.
Patton, Holiday O. & G. Co. 5.
Franklin Bank, Ohio F. S. Co. 5.
Acker heirs, Murray City O. & G. Co. 8.
Sunday C'k. C. Co., Sunday C'k. C. Co. 136.
Tracey estate, Kachelmacher estate 22.
Friehl heirs, Pery Sturm 1.
Fletcher, Schlecker 1.
Long, Craig Adair 1.
Guy, Cline Bros. 1.
Butts, Leonard O. & G. Co. 1.

HOCKING COUNTY

Rigs

Melbrim, Gordon Oil Co. 2.
Stone, Gordon Oil Co. 2.

Wells Drilling

Anthony, Gordon Oil Co. 5.
Funk, Cabin Ridge O. & G. Co. 1.
Wolf, Chartiers Oil Co. 3.
Mowry, Fellowship Oil Co. 1.
Blair, Jewell O. & G. Co. 1.
Marlow O. & G. Co., Griffin Prod. Co. 4.
H. V. P. Co., Chartiers Oil Co. 200.
Sunday C'k C. Co., Sunday C'k C. Co. 137.
Hazelton heirs, Big Ten O. & G. Co. 3.
Stacy, Sheren & Co. 4.
Crawford, Martin Oil Co. 1.

HOLMES COUNTY

Rigs

Allison, East Ohio Gas Co. 1.
Hastings, East Ohio Gas Co. 1.
Cullens, Kemrow Co. 1.
Snyder, Pure Oil Co. 2.
Shankland, Ohio F. G. Co. 1.

Wells Drilling

Carpenter, East Ohio Gas Co. 1.
Miller, East Ohio Gas Co. 1.
Middaugh, East Ohio Gas Co. 1.
B. Middaugh, Leonard O. & G. Co. 1.
Snow, Kenrow Co. 1.
Steel, Empire G. & F. Co. 1.
Netherow, Empire G. & F. Co. 2.
Donald, Empire G. & F. Co. 1.
Uhl, Pure Oil Co. 1.
Close, Pure Oil Co. 2, 3.
Anderson, East Ohio Gas Co. 5.
Marquis, Pure Oil Co. 3.

GUERNSEY COUNTY

Rigs

Rankin, Ohio F. S. Co. 1.
Speer, Ohio Oil Co. 2.
Beeks, Logan Gas Co. 1.
Morrison, Matthews & Co. 1.
Purdum, Cambridge Gas Co. 3.
White, Leonard O. & G. Co. 1.

Wells Drilling

Mercer, Ohio Oil Co. 3.
Williams, Logan Gas Co. 1.
White, Leonard O. & G. Co. 2.
Gibson, Mathews & Co. 1.
Fulton, Stoltz & Co. 1.
Adams Township Lot, Keith & Co. 1.
Wayne Mining Co., Detroit Edison Co. 1.
Irwin, Pure Oil Co. 1.

LICKING COUNTY

Rigs

Seward, Pure Oil Co. 5.
Swigert, E. H. Everett Co. 2.
Weiss, Rugg & Co. 7.
Franks, Detex O. & G. Co. 7.

Wells Drilling

Pound, Farmer & Co. 4.
McKinney, Rugg & Co. 6.
Burke, Deeker & Co. 1.
Wolf, Moore & Adams 2.
Rodgers, Spindler & Donalson 2.
Wise, Wehrle Bros. 1.
Long, Wehrle Bros. 1.
Ingman, Wehrle Bros. 4.
Hanover Brick Co., Hope C. & R. Co. 2.
Porter, E. H. Everett Co. 4.
Bogle, Midland Oil Co. 2.
Hupp, Midland Oil Co. 1.
Armstrong, Flint Ridge O. & G. Co. 6.
Uffner, Hope C. & R. Co. 1.
Brown, Pure Oil Co. 1.
Cartnal, Pure Oil Co. 2.
Weakley, Planet Oil Co. 5.
Lougham, Pure Oil Co. 6.
Varner, Leonard O. & G. Co. 1.

MUSKINGUM COUNTY

Well Drilling

Boyer, Whitehill & Co. 6.

COSHOCTON COUNTY

Rigs

McKee, Spindler & Co. 4.
Fair, Ohio Oil Co. 15.
McFarland, Ohio F. S. Co. 3.

Wells Drilling

Moore, Ray Dairy O. & G. Co. 1.
Wheeler-Mossholder, Murphy Oil Co. 2.
Wright, Kemrow Co. 1.
Rine, Preston Oil Co. 1.

FAIRFIELD COUNTY

Wells Drilling

Miller, Planet Oil Co. 1.
Thompson heirs, Thompson & Co. 1.

MORGAN COUNTY

Williams, Pure Oil Co. 3.
Woolman, Ohio Fuel Co. 1.

Wells Drilling

Fye, Pure Oil Co. 10.
Mounts, Pure Oil Co. 1.
Kirkwood, Sun Oil Co. 1.
White, Daily Oil Co. 1.
Pletcher, Swingle O. & G. Co. 3.
Spurrier, Bowman O. & G. Co. 1.
Newton, Cameron O. & G. Co 1.
Epply, Ohio F. S. Co. 3.

KNOX COUNTY

Rigs

Heaton, Pure Oil Co. 3.
Lower, Ohio F. S. Co. 1.

Wells Drilling

Dugan, Ark. Fuel Oil Co. 17.
Davidson, Margaret Oil Co. 6.
Mizer, Pure Oil Co. 2.
Logsdon, Upham Gas Co. 1.

NOBLE COUNTY

Wells Drilling

Longfellow, Wash-Noble O. & G. Co. 1.
Warren, W. T. Warren 1.
Smith-Britton, Smith & Britton 1.
Williams, Herds O. & G. Co. 4.
Hill, C. D. Harper & Co. 1.
Brown, Yerain & Co. 4.
Carpenter, Myers & Co. 1.
Boyde, Rucker & Co. 3, 4.

ATHENS COUNTY

Wells Drilling

Lax, Harmon & Co. 1.
Hewitt, Guenther & Co. 1.
Biddle, Biddle O. & G. Co. 4.
Whaley, Beasley & Co. 10.
State Hospital, Gross & Co. 2.
Walsh, Cook & Co. 1.
Walburn, Gordon Oil Co. 1.

MEIGS COUNTY

Wells Drilling

Snowball, Benedict & Bush k.
Singer, Meigs & Summers O. & G. Co. 1.
Inman, Meigs & Summers O. & G. Co. 1.
Jivisen, W. N. Hovis 3.
Yost heirs, Pure Oil Co. 4.

WASHINGTON COUNTY

Rig

Kiggins, Grau & Co. 4.

Wells Drilling

Newien, Daily & Co. 4.
Heldman, Heldman & Co. 1.
Gitchell, Hendeson Oil Co. 4.
Hevetlauer, Harris & Co. 1.
Murray, Beeson & Athy 1.
Schramm, Clymer & Co. 4.
Jackson, National Bank 12.
Williams, J. C. Carner & Co. 1.
Wolfert, Meister & Co. 14.
Wharton, Ward & Co. 1.
Mosser, Henning & Co. 12.
Decker, Decker & Cisler 7.
McClelland, Harry Bineger 2.

JEFFERSON COUNTY

Wells Drilling

Boyer, Norris & Co. 8.
Tope & Co., N. R. Edmonston 2.

CARROLL COUNTY

Wells Drilling

Harrington, N. G. Co. of W. Va. 3.
Rorrance, Vorhees & Co. 1.

BELMONT COUNTY

Wells Drilling

Jeffers, Hamilton & Co. 1.
Bumgardner, N. G. Co. of W. Va. 2.

COLUMBIANA COUNTY

Wells Drilling

Deborch-Teetera, Benninghoff & Co. 13.
Davidwoh, J. N. Davidson 5.
Pieren, George Kirk, Jr. 9.
Rigs, 27; wells drilling, 127; total, 154.

CENTRAL OHIO

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Knox	2	0	1	1	1	6	8
Ashland	5	0	1	4	9	9	18
Medina	2	0	2	0	2	13	15
Lorain	0	0	0	0	1	5	6
Wayne	4	0	1	3	3	12	15
Holmes	7	172	4	0	6	17	23
Athens	2	0	0	2	1	10	11
Coshocton	3	0	0	3	3	5	8
Guernsey	9	0	0	9	19	9	28
Cuyahoga	6	0	1	5	0	4	8
Richland	1	0	1	0	0	1	1
Total June	41	172	11	27	45	97	142
Total May	28	595	5	17	49	67	116
Difference	13	423	6	10	4	30	26

CENTRAL OHIO

WELLS COMPLETED

KNOX COUNTY

Jefferson—J. Rowland, Ohio Fuel Gas 1 ... gas
Brown—O. J. Beck, East Ohio Gas 11 ... dry

Wells completed	2
Dry	1
Gas	1

ASHLAND COUNTY

Orange—W. H. Brandt, Logan Gas 1 ... gas
H. B. Wertman, Logan Gas 3 ... gas
Sullivan—Addison Stents, Logan Gas 1 ... gas
J. A. Spencer, Klise-Eckstein-McCann 2 ... gas
Clear Creek—L. C. McClain, Savannah Oil & Gas 1 ... dry

Wells completed	5
Dry	1
Gas	4

MEDINA COUNTY

Chatham—E. & A. Clapp, Ohio Fuel Supply 13 ... dry
Ed Goodyear, Harry Dempsey 2 ... dry

Wells completed	2
Dry	2

WAYNE COUNTY

Congress—S. A. Swanson, Warren Palmer & Co. 2 ... gas
C. Spreng, Arco Oil 3 ... gas
Clayton Good, Glen Harmon & Co. 2. gas
Cannan—Mary Giffin, J. R. Mayes & Co. 3 ... dry

Wells completed	4
Dry	1
Gas	3

HOLMES COUNTY

Monroe—C. B. Bell, C. B. Bell Oil & Gas 1 ... dry

XUM

Paint—Yost Weaver, Ohio Fuel Gas 1...dry
Hardy—Mary E. Bridges, Empire Gas & Fuel 2 65
C. E. Schlarb & Co., East Ohio Gas 1. 95
E. B. Archer, Ohio Fuel Gas 1 12
Kilbuck—Rachael Mohr, Ohio Oil 2.....dry
Albert Smith, Ohio Oil 1 .....dry

Wells completed 7
Oil wells 3
Production, oil 172
Dry 4

ATHENS COUNTY

Carthage—J. W. Barnhill, Logan Gas 1 gas
Margy Lowan, E. A. Sweeney & Co. 1 gas

Wells completed 2
Gas 2

COSHOCTON COUNTY

Newcastle—Cassingham, Cassingham & Bell Bros. 12 .....gas
C. B. & N. Ogle, Logan Gas 1 .....gas
C. L. Shrimplin, Logan Gas 1 .....gas

Wells completed 3
Gas 3

GUERNSEY COUNTY

Adams—W. L. Ford, Ohio Fuel Gas 1...gas
T. B. Speer, Ohio Oil 1 .....gas
F. C. Keith, Ohio Oil 1 .....gas
Alice B. Mehaffey, Ohio Oil 1 .....gas
Wm. Knight, Big Lime Oil 1 .....gas
Cambridge—M. A. Gibson, T. A. Matthews & Co. 1 .....gas
Albert Woodburn, Ohio Fuel Gas 1...gas
R. A. McBride, Wittmer Property Trus 1 .....gas
Westland—J. C. Arthus, Ohio Fuel Gas 1 gas

Wells completed 9
Gas 9

CUYAHOGA COUNTY

Dover—J. P. Deubel, Hulse & Kundtz 1.dry
C. & C. Miller, Arthur & Simpson 1...gas
W. Glasgow, Arthur & Simpson 1....gas
J. C. Lemmon, McGrath & Co. 2....gas
Strongville—B. H. Adams, East Ohio Gas 1, 2 .....gas

Wells completed 6
Dry 1
Gas 5

RICHLAND COUNTY

Madison—Emil Schausee, Mansfield Oil & Gas 2 .....dry

KNOX COUNTY
Rig

Brown—Fred Kick, East Ohio Gas 4.

Wells Drilling

Brown—John H. Workman, Ohio Fuel Gas 6.
J. J. & S. M. Hair, Upham Gas 1.
Jefferson—Jacob Greer, James & Greer 1.
A. Arwiller, East Ohio Gas 2.
Peter Kaufman, East Ohio Gas 1.
Bert Nyhart, I. E. O'Hail 2.
Catherine Logsdon, Upham Gas 1.
W. E. Tisserand, Rocky River Oil 2.
Rig, 1; wells drilling, 8; total, 9.

ASHLAND COUNTY
Rigs

Orange—Floyd Shannon, Logan Gas 2.
Mrs. Jennie Murray, Logan Gas 1.
Hanover—Frank Firestone, Logan Gas 2.
Mary Krumpt, Ohio Fuel Gas 1.
Greene—Sanitary Products Co., Wiser Oil 1.
Sullivan—Hattie Tedrow, Logan Gas 1.
D. E. Spencer, Ohio Fuel Gas 1.
Clear Creek—Wm. Burns, Hulse & Kundtz 1.
Miflin—Martha King, Geiger & Barnhart 1.

Wells Drilling

Orange—K. H. Flute, Logan Gas 1.
J. A. Albright, Logan Gas 1.
P. C. Fritzinger, Preston Oil 2.
Hanover—M. D. Leatherow, Ohio Fuel Gas 1.
J. H. Miller, East Ohio Gas 1.
A. C. Hazlett, Logan Gas 1.
P. C. Cowan, Logan Gas 5.
Greene—J. R. Walton, Logan Gas 1.
Gotlieb Koch, Ohio Fuel Gas 1.
Rigs, 9; wells drilling, 9; total, 18.

MEDINA COUNTY
Rigs

Litchfield—Geo. Kennedy, Geisinger & Co. 1.
Lafayette—H. S. Koppes, Ohio Fuel Gas 1.

Wells Drilling

Litchfield—Cora B. Pfeifer, Hulse & Kundtz 1.
Leland R. Seeley, Logan Gas 9.
Westfield—T. B. England, Logan Gas 1.
Montville—E. L. McFadden, Ohio Fuel Gas 1.
Lafayette—R. O. Wheeler, Ohio Fuel Gas 1.
Wm. A. McCabe, John Arthur 1.
Granger—A. Rockwood, Empire Gas & Fuel 1.
Liverpool—Albert Trefany, Ohio Fuel Gas 1.
Nick A. Granson, Logan Gas 1.
York—Frank Patlowany, Logan Gas 1.
Frederick Baker, Hulse & Kundtz 2.
Chatham—Isaac Kent, Star Oil 3.
Brunswick—Delphia J. Hitchcock, Ohio Fuel Gas 1.
Rigs, 2; wells drilling, 13; total, 15.

LORAIN COUNTY
Rig

Columbia—Wm. Rundel, Logan Gas 2.

Wells Drilling

Columbia—S. A. Ives, Empire Gas & Fuel 1.
Jacob Landin, Logan Gas 1.
Robt. Squires, Ohio Fuel Gas 1.
Rose Adams, Chemical Oil & Gas 1.
Grafton—Joe A. Rising, Logan Gas 1.
Rigs, 1; wells drilling, 5; total, 6.

WAYNE COUNTY
Rigs

Wooster—Lee Martin, Ohio Oil 3.
Green—C. S. & C. A. Eby, W. E. Hawk & Co. 2.
Union—M. Lautenschlager, Logan Gas 1.

Wells Drilling

Wooster—Jas. M. Carroll, Ohio Oil 4.
Milton—C. W. Frick, East Ohio Gas 2.
Paint—J. M. Westcott, Ohio Fuel Gas 1.
Greene—C. S. & C. A. Eby, W. E. Hawk & Co. 1.
A. J. Shissler, Logan Gas 1.
Chippewa—J. Muick, East Ohio Gas 1.
A. Zollinger, Westheffer & Winger 1.
Franklin—D. E. & Ida Schmuck, Ohio Oil 11.
Congress—O. E. Frank, Logan Gas 2.
Atanley Smith, Ohio Fuel Gas 1.
Cannan—T. A. Morrow, Wm. Denney & Co. 1.
Baughman—Lorena King, Logan Gas 1.
Rigs, 3; wells drilling, 13; total, 15.

HOLMES COUNTY
Rigs

Monroe—John R. Shankland, Ohio Fuel Gas 1.
Hardy—Warren R. Close, Pure Oil 4.
Bernice Allison, East Ohio Gas 1.
John R. Hastings, East Ohio Gas 2.
Mary A. Findlay, Empire Gas & Fuel 1.
Jesse P. Close, Empire Gas & Fuel 3.

Wells Drilling

Monroe—Oscar Steel, Empire Gas & Fuel 1.
Lizzie Rumbacher, Ohio Fuel Gas 1.
William Miller, Arkansas Fuel Oil 3.
Prairie—Lee Durbin, Pure Oil 3.
Paint—Levi Weaver, Logan Gas 1.
Dan C. Wengard, Ohio Fuel Gas 1.
S. J. Miller, Ohio Fuel Gas 1.
Hardy—D. R. Anderson, East Ohio Gas 2.
Warren R. Close 84-a, Pure Oil 2, 3.
Mrs. Wilson Pyers, Pure Oil 1.
Lewis Donald, Empire Gas & Fuel 1.
D. Nethrow, Empire Gas & Fuel 2.
Kilbuck—Sanford Carpenter, East Ohio Gas 1.
Christian Miller, East Ohio Gas 1.
Jacob A. Middaugh, East Ohio Gas 1.
Salt Creek—Adam Karch, Empire Gas & Fuel 1.
Rigs, 6; wells drilling, 17; total, 23.

ATHENS COUNTY
Rig

Carthage—J. W. Barnhill, Logan Gas 2.

Wells Drilling

Carthage—J. E. Bailey, Jay Oil & Gas 9.
G. E. Bradford, Goddard & Cunningham 1.
Oliver Davis, Hawkins & Co. 1.
J. L. Yarner, Fairfield Gas 1.
Edward Burke, C. W. Nuzum 2.
Elijah Dunlavey, Ohio Fuel Gas 1.
Eaton Close, Logan Gas 1.
S. A. Wilson, Logan Gas 2.
Waterloo—Lafayette Hewitt, Guenthre & Co. 2.
Rome—E. S. Byron, H. W. Leeper & Co. 3.
Rig, 1; wells drilling, 10; total, 11.

COSHOCTON COUNTY
Rigs

Tiverton—W. S. & Sarah Cooper, Logan Gas 1.
Newcastle—Canal Bed, Cline Bros. 1.
Linton—Cliff McFarland, Ohio Fuel Supply 1.

Wells Drilling

Perry—Rudolph T. Rine, Logan Gas 1.
Marin G. Wright, Klise-Eckstein-McCann 1.
D. W. Mossholder, Murphy & Co. 2.
Newcastle—Wm. Johnson, Logan Gas 1.
Monroe—Guy Pyers, Ohio Oil 1.
Rigs, 3; wells drilling, 5; total, 8.

GUERNSEY COUNTY
Rigs

Adams—George Bell, Ohio Fuel Gas 1.
Anna M. Jerels, Ohio Fuel Gas 1.
W. L. Ford, Ohio Fuel Gas 2.
C. O. Watson, Ohio Fuel Gas 2.
Riley Moon, Ohio Fuel Gas 1.
G. C. Smith, Ohio Fuel Gas 1.
Wilmer Oliver, Ohio Fuel Gas 1.
O. C. Ford, Ohio Fuel Gas 1.
H. F. LaPage, Ohio Fuel Gas 1.
Joseph D. Taylor, Ohio Fuel Gas 1.
Henry M. Stock, Ohio Fuel Gas 1.
M. K. Wells, Logan Gas 1.
Wayne Mining Co., Detroit Edison Co. 1.
Cambridge—Harry M. Steel, Ohio Fuel Gas 1.
W. G. Morrison, T. A. Matthews & Co. 1.
Sarah Ford, Cambridge Glass 1.
Wheeling—Cana Forney, Ohio Fuel Gas 1.
Westland—T. A. White, Leonard Oil & Gas 1.

Wells Drilling

Adams—W. C. Morrison, Ohio Fuel Gas 1.
Lola Shriver, Ohio Fuel Gas 1.
T. A. Rankin, Ohio Fuel Gas 1.
T. B. Speer, Ohio Oil 2.
Maud Oliver, Ohio Oil 1.
Seward R. Williams, Logan Gas 4.
James Mercer, Ohio Oil 3.
Martin L. Medley, Big Lime Oil 1.
Westland—H. W. Fulton, Stoltz & Co. 1.
Rigs, 19; wells drilling, 9; total, 28.

CUYAHOGA COUNTY
Wells Drilling

Dover—James Jenkins, Hulse & Kundtz 1.
Nellie E. Hodge, Hulse & Kundtz 1.
E. and T. Rose, Logan Gas 1.
C. Nichols, Wiser Oil 1.
F. J. Inch, H. A. and W. J. Dempsey 1.
W. H. Reeves, Mulford Portmann 1.
J. Gessner, Daugherty Brothers 1.
Middleburg—P. & A. Jenke, East Ohio Gas 1.
Wells drilling, 8.

RICHLAND COUNTY
Wells Drilling

Madison—L. A. Keith, G. H. Schrack & Co. 1.

LIMA FIELD

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wood	10	106	0	0	0	6	6
Hancock	8	97	0	0	0	8	8
Allen	7	180	0	0	0	6	6
Auglaize	3	34	1	0	0	5	5
Sandusky	4	40	0	0	0	2	2
Mercer	7	58	0	0	0	6	6
Seneca	0	0	0	0	0	2	2
Lucas	1	20	0	0	0	2	2
Ottawa	4	31	0	0	0	5	5
Shelby	8	85	3	0	0	6	6
Hardin	2	26	0	0	0	3	3
Darke	3	0	1	2	0	1	1
Paulding	0	0	0	0	2	1	3
Logan	1	6	0	0	0	0	0
Clark	0	0	0	0	0	1	1
Wyandot	0	0	0	0	0	1	1
Michigan	3	45	1	0	0	18	18
Total June	61	708	6	2	2	73	75
Total May	43	814	5	0	10	62	72
Difference	18	106	1	2	8	11	3

LIMA FIELD
WELLS COMPLETED
WOOD COUNTY

Montgomery—Holliday - Hamilton, Ohio Ohio Oil 19 .....abd
A. E. Lesher, Ohio Oil 1 .....abd
Freedom—Fuhr-Villwock, Ohio Oil 44, 72, 84, 101, 110 .....abd
John Keanaker, Ohio Oil 3 .....abd
Plain—Pinert-Munn, F. Lee Ruse & Co. 17, 18, 20, 24 .....abd
Henry—Franks, White & Co., Ohio Oil 44 20
Liberty—Royal Mercer, Ohio Oil 11 5
M. P. Brewer, Vanlue Oil 1, 2, 3....abd
Eli Stockwell, F. Lee Rouse & Co. 15 abd
Middleton—E. Rhinefrank, Eugene Rhinefrank 1 4
Frank Rogers, Otta A. Brown 7..... 1
Perrysburg—Geo. Deverna, Oko Oil & Gas 6 27
Louisa Deverna, Oko Oil & Gas 4.... 12
Wm. Grolle, Sr., Hoffman & Haas 4.. 17
J. J. Hellman, Oko Oil & Gas 1 15
Lake—Andy Stensen, Chas. F. Zeising & Co. 1 2
Fred Bendt, Lantz, Schulte & Co. 1.. 3
Henry Nahnsen, R. G. Bowe & Co. 1 abd

Wells completed 10
Production 106
Abandoned 17

HANCOCK COUNTY

Liberty—Wm. Sawyer, Stitt & Sawyer 6. 2
Wm. Sawyer, Stitt & Sawyer, 1, 2, 3. abd
Joe Ernst, Keiser Oil 1 20
Portage—C. L. Turley, Ohio Oil 9 4
J. Moorehead, north, Ohio Oil 12..... 15
Eagle—Jacob Fetters, Fuller & Co. 20.. 15
H. P. Smith, Fuller & Co. 16 10
Alice Stauffer, Star & Clark 10..... 25
Orange—A. E. Lugabill, Ohio Oil 12.... 1

Wells completed 8
Production 97
Abandoned 3

ALLEN COUNTY

Bath—P. D. Driver, O. T. Botkins & Co. 3 15
Wm. Lenney, Chas. Geselchen & Co. 5. 50
Wm. Lenney, Chas. Geselchen & Co. 6. 60
S. H. Vore, C. A. Peavey & Co. 4.... 20
S. H. Vore, C. A. Peavey & Co. 5 25
Elias Lewis, C. A. Peavey & Co. 12, 13 abd
Spencer—J. A. Beerman, Gwinn Oil & Gas 6 5
J. C. Harbert, Oko Oil & Gas 14..... 5
Jackson—N. I. Cool, Chas. Geselchen & Co. 2 .....abd
J. T. Driver, Chas. Geselchen & Co. 4, 5 .....abd
Marion—James Ford, Wm. Lang, 1, 11, 15 .....abd
America—Eph Miller, Ohio Oil 1, 2....abd
C. N. Stalter, Ohio Oil 1, 2, 3.....abd

Wells completed 7
Production 180
Abandoned 13

AUGLAIZE COUNTY

Moulton—J. H. Harshbarger, Kelly Oil 2 2
A. Sillin, I. C. Robison 1 .....dry
Salem—W. T. Seibert, Bachelor Oil 10 . 32
Douchouquet—J. Reichelderfer North, Ohio Oil 5 .....abd
Allen Spyker, Ohio Oil 5 .....abd

Wells completed 3
Production 34
Dry 1
Abandoned 2

SANDUSKY COUNTY

Washington—Amos Waggoner, Bee Oil 2 15
Scott—Wm. O. Doll, Harley, Henderson & Warner 4 3
Jackson—O. D. Dibert, Hurry Up Oil 16. 2
S. M. Klutz, Home Banking 3. 20
W. A. Overmyer, Mascho, Mascho & Sheets 3, 4 .....abd
Wm. L. Hutchins, Mascho, Mascho & Sheets 1 .....abd
Eli Hufford, Mascho, Mascho & Sheets 2, 3 .....abd
Sandusky—Rebeca Fought, Walters & Ervin 2, 8 .....abd

Wells completed 4
Production 46
Abandoned 7

MERCER COUNTY

Center—Chas. Nolan, H. E. Masters 4... 8
James M. Nolan, Ohio Oil 2 25
Moses Townsend, Mack P. Colt & Co. 2 15
Union—Mary Hattery, M. P. Colt & Co. 2, 4, 7, 9, 10, 11, 12, 13, 14, 15, 16 ..abd
B. Nichols, M. P. Colt & Co. 2, 3, 7, 9, 13, 14, 15 .....abd
Butler—Jos. G. Wenning, J. E. Bailey 3 2
Hopewell—Steve Hellwarth, June Oil 1.. 1
Recovery—Rose Fecher, Sam W. Tate Jr. 3 2
Jefferson—Hacker heirs, D. A. Miller & Co. 4 5

Wells completed 7
Production 58
Abandoned 18

LUCAS COUNTY

Oregon—Gertrude J. Niles, Ohio Oil 42.. 20

OTTAWA COUNTY

Harris—H. W. Nieman, Burman Oil 2... 5
J. H. Bearman, Ohio Oil 14 5
E. W. Yeasting, Zorn-Hornung Oil 15. 6
Jas. H. Myers, Ohio Oil 8 15

Wells completed 4
Production 31

SHELBY COUNTY

Cynthian—Theresa Goffena, E. E. Laughner 3 5
J. Monnin, Lee A. Watson 1 15
J. Monnin, Lee A. Watson 2 10
Frank Danzig, Ft. Laramie Oil & Gas 6 25
J. Zimmerman No. 2, Wittmer Property Trus. 3 10
A. Barnhorst, Slagel & Johnson 2 ...dry
McLean—Ellerman, Slagel — Johnston 1 dry
Henry C. Wolke, Millick & Co. 1.....dry

Wells completed 8
Production 65
Dry 3

HARDIN COUNTY

McDonel—Erwin Hites, Roundhead Oil & Gas 7 17
Gilmore-Cockley, New York Coal 2.... 14

Wells completed 2
Production 26

DARKE COUNTY

Patterson—G. W. Fritchup, Lee A. Watson 1 .....gas
J. Pepperman, Pepperman Oil 1. .gas
Mississinewa—H. W. Long, J. G. Hoffman 7 .....dry

Wells completed 3
Dry 1
Gas 2

LOGAN COUNTY

Belle Center—Mack, G. L. Schumacher & Co. 1 6

WELLS COMPLETED
MICHIGAN
SAGINAW COUNTY

Saginaw—John Palvez, Saginaw Prospecting 1 20
Adam Nuerminger, The Sun Co. 1.... 25

Wells completed 2
Production 45

ST. CLAIR COUNTY

Near Blaine—Sanilac-St. Clair Prospecting 2 .....dry

WOOD COUNTY
Wells Drilling

Plain—M. Lamb, Eckler & Collins 16.
Liberty—E. E. & J. H. Abbott, Hulse & Kundtz 1.
Webster—Mike Roller, John Geldin & Co. 2.
Perrysburg—Chas. Tiase, Oko Oil & Gas 1.
J. H. Hellman, Oko Oil & Gas 1.
H. Grolle, Wm. G. Grolle 3.
Wells drilling, 6.

HANCOCK COUNTY
Wells Drilling

Liberty—J. K. Wheeler, Baseline Oil 5.
J. Steen, Baseline Oil 11.
M. E. Discus, Kirk & Discus 1.
Allen—Hy Franks, P. J. Pool Estate 12.
Eagle—H. S. Haley, Porter & Co. 23.
S. & M. S. Deeds, J. M. Steen & Co. 23.
Frank Freed, R. T. Rittenhouse 4.
Biglick—L. Wondres, Ridge Oil & Gas Syndicate 1.
Wells drilling, 8.

ALLEN COUNTY
Wells Drilling

Bath—S. H. Vore, C. A. Peavey & Co. 6.
Wm. Lenney, Chas. Geselchen & Co. 7.
Spencer—Ed Reynolds, South Fork Oil 4.
Jasper Purdy, W. B. Everbeck & Co. 4.
Elmer Wilkins, W. B. Jack 2.
Marion—John Lucius, Mack P. Colt 3.
Wells drilling, 6.

AUGLAIZE COUNTY
Wells Drilling

Moulton—J. H. Gochenour, Ohio Oil Co. 17.
Chas. Fritz, Wheeling & Zimmerman 1.
Union—Ira Price, Campbell & Co. 1.
J. Harrod, Tester & Co. 1.
Jackson—Joseph Woehrmeyer, Crystal Oil 4.
Wells drilling, 5.

SANDUSKY COUNTY
Wells Drilling

Washington—Amos Waggoner, Bee Oil 3.
John H. Waggoner, Ohio Oil 9.
Wells drilling, 2.

MERCER COUNTY
Wells Drilling

Center—E. Snavely, Ohio Oil 7.
Moses Townsend, Mack P. Colt & Co. 3.
Butler—Jos. G. Wenning, J. E. Bailey 4.
Recovery—Rose Fecher, Sam T. Tate Jr. 4.
H. J. Stashler, A. W. Neely & Co. 7.
Liberty—J. Ballenbacher, Beatty & Hays 4.
Wells drilling, 6.

SENECA COUNTY
Wells Drilling

Clinton—A. E. Geyer, Arthur E. Geyer 1.
Liberty—D. Thinker, Murphy & Sons 1.
Wells drilling, 2.

LUCAS COUNTY
Wells Drilling

Monclova—Wm. Black, L. W. Vermilya Rec. 2.
Jerusalem—E. H. & M. A. Eck, Ohio Oil 21.
Wells drilling, 2.

OTTAWA COUNTY
Wells Drilling

Harris—John H. Meyers, Ohio Oil 9.
Chas. F. Magsig, Gust Magsig & Sons 12.
Benton—Wm. Miessen, Gladieuz & Herman 2.
Salem—A. H. Mylander, Oak Harbor Natural Gas 1.
Wells drilling, 5.

SHELBY COUNTY
Wells Drilling

Cynthian—Theresa Coffena, Ohio Oil 2.
Theresa Coffena, E. E. Laughter 4.
Jennie Monnin, Lee A. Watson 3.
Joseph Siegel, Wittmer Property Trus. 4.
F. Borcher, Ellerman Oil 1.
McLean—Henry Ernst, L. T. McGrath 3.
Wells drilling, 6.

HARDIN COUNTY
Wells Drilling

McDonel—A. B. Zimmerman, Hardin Oil & Gas 6.
Ira C. Shick, Boston-Southwestern Oil & Gas 1.
Elizabeth Arthur, Roundhead Oil & Gas 5.
Wells drilling, 3.

DARKE COUNTY
Well Drilling

Mississinewa—W. C. Disher, Cole Oil & Gas 14.

PAULDING COUNTY
Rigs

Harrison—C. Springer, John T. Schunck 5.
A. M. Bailey, U. S. A. Oil 6.

Well Drilling

Jackson—Wm. Russell, Detroit-Cleveland Oil & Gas 1.
Rigs, 2; well drilling, 1; total, 3.

CLARK COUNTY
Well Drilling

Mattison—T. D. Friend 1.

WYANDOT COUNTY
Well Drilling

Ridge—C. A. Cooper, Ridge Gas & Oil Syndicate 1.

MICHIGAN
Wells Drilling
SAGINAW COUNTY

Saginaw—Fred Engle, Bliss Petroleum 1.
Carl Boldebuck, Bliss Petroleum 1.
E. E. Householder, Saginaw City Bldg. 1.
Mrs. Jane Marshall, V. M. Vorhees & Co. 1.
Oakley-Reed Streets, Glen R. Wilson & Co. 1.
City of Saginaw, Saginaw Prospecting 2.
Hanson, Saginaw Prospecting 1.
John Brimner, Saginaw Prospecting Co. 1.
John Schonteit, The Sun 1.
John Spatz, Superior Oil 1.
Ernest Fisher, Ohio Fuel Corp. 1.
Mershon-Eddy-Parker, Ohio Oil 1.
Henry Owen, Charles Murrin 1.
Schwannecke, Gardner Petroleum 1.
John Kundinger, Local Developing Corporation 1.
John Winter, W. D. Bergherin 1.
Wells drilling, 16.

JACKSON COUNTY
Well Drilling

Napoleon—Silvers, Jackson County Oil & Gas 1.

MONROE COUNTY
Well Drilling

Dundee—Frank Roe, Jackson County Oil & Gas 1.

ILLINOIS

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Clark	3	105	0	0	8	1	
Cumberland	1	5	0	0	0	1	
Crawford	4	29	1	0	5	1	
Lawrence	4	25	1	1	4	1	
Wabash	11	677	4	1	13	1	
Marion	1	0	1	1	4	1	
Coles	0	0	0	0	2	1	
Douglas	0	0	0	0	1	1	
Jasper	1	0	1	0	0	1	

Fayette	0	0	0	1	0	1
Edwards	0	0	0	0	1	1
Randolph	0	0	0	0	1	1
Madison	0	0	0	0	1	1
McDonough	0	0	0	0	4	4
Total June	25	841	8	4	44	48
Total May	29	480	9	6	33	39
Difference	4	361	1	2	11	9

WELLS COMPLETED
CLARK COUNTY

Parker—N. & K. Young, Ohio Oil 117 .. 15
Martinsville—Harriett Slater, Mahutska Oil 4 .. 60
A. W. Covalt, Ohio Oil 4 .. 30

Wells completed .. 3
Production .. 105

CUMBERLAND COUNTY

Union—J. G. Paden, Campbell, Peck & Co. 3 .. 5

CRAWFORD COUNTY

Oblong—O. R. Smith, Mahutska Oil 17 .. 4
Frank Coudrey, Brenneman & McDonald 1 .. dry
Honey Creek—Wm. C. Haas, Gealy & McDowell 3 .. 20
Robinson—E. E. Newlin, Canadian O. & G. 16 .. 5

Well completed .. 4
Production .. 29
Dry .. 1

LAWRENCE COUNTY

Dennison—E. J. Ridgeley, Ohio Oil 11 .. 2
J. W. Vandermark, Ohio Oil 5 .. dry
Thos. Taylor, Treat-Hays Oil 1 .. 3
Jos. Gray, Hamilton Producing 8, 9 .. abd
Petty—J. B. Smith, Ohio Oil 2 .. abd
Bridgeport—Ellen Lutz, Big Four O. & G. 1 .. 20

Wells completed .. 4
Production .. 25
Dry .. 1
Abandoned .. 3

WABASH COUNTY

Wabash—M. Madden, Adams Corner Oil 7 .. 120
Holson-Dorney, Max Oil 7 .. 70
Hogan heirs, Mayhugh & Co. 4 .. 225
T. M. Leek, Mt. Carmel Oil 5 .. 200
Cisil heirs, Cisil Heirs Oil 3 .. 15
Jesse Cisil, Eastern Gulf Oil 2 .. 10
Howard Armstrong, J. W. Whiteside & Co. 3 .. 7
C. C. Clark, J. S. Young, Jr. & Co. 1 dry
John Barney, J. S. Young, Jr. & Co. 1 dry
Van Wright, J. S. Young, Jr. & Co. 1 dry
Howard Armstrong, J. W. Whiteside & Co. 2 .. abd
Friendsville—J. W. Price, J. S. Young, Jr. & Co. 2 .. dry

Wells completed .. 11
Production .. 677
Dry .. 4
Abandoned .. 1

MARION COUNTY

Centralia — Cooksey - Mardina, Gorman-Huddleston Oil 1 .. dry

JASPER COUNTY

Grandville—M. Ritter, Wimsett & Co. 1 dry

CLARK COUNTY
Wells Drilling

Parker—J. S. Phillips, Ohio Oil 28.
Westfield—W. R. Shuey, Adkins & Co. 2.
Casey—James Rush, W. C. McBride, Inc. 24.
W. L. Slater, Trenton Rock O. & G. 1.
Martinsville—M. J. McClelland, Mahutska Oil 4.
Chas. McFarland, Terre Haute Oil 2.
Johnson—C. H. Riggs, Ohio Oil 6.
C. O. Gross No. 2, Southern Oil 33.
Wells drilling, 8.

CRAWFORD COUNTY
Wells Drilling

Martin—L. M. Highsmith, Abbott & Co. 1.
Prairie—Amelia E. Joseph, McNally & Starr 7.
Robinson—Harry E. Ottey, McNally & Co. 1.
Montgomery—G. B. Ford, Walter Squires & Co. 9.
Licking—Silas Wilkins, Peoples Bank & Trust 4.
Wells drilling, 5.

LAWRENCE COUNTY
Rig

Dennison—Mrs. G. H. Highsmith, Frank H. Brown & Son 1.

Wells Drilling

Dennison—Ella Smith, Andrews & Co. 1.
Petty—W. H. Pemberton, Pemberton O. & G. 25.
Bridgeport—J. R. Middaugh, Ohio Oil 23.
Russell—A. J. Vaught, Hartman & Co. 1.
Rig, 1; wells drilling, 4; total, 5.

WABASH COUNTY
Rig

Wabash—E. Alka heirs, J. S. Young, Jr. & Co. 3.

Wells Drilling

Wabash—M. Madden, Mahutska Oil 4.
Jerema Cisil, W. C. McBride, Inc. 2.
Nora Marcotte, W. C. McBride, Inc. 5.
W. M. Price, Risley & Co. 1.
J. T. Smith, Adams Corner Oil Co. 6.
Jesse Cisil, Eastern Gulf Oil 3.
J. G. Trimble, J. S. Young, Jr. & Co. 2.
J. G. Trimble, Snowden & McSweeney 1.
Friendsville—H. C. Yelton, W. M. Ball & Co. 2.
J. O. Wood, Clark, Oldendorf 2.
.. W. Price, Keller & Co. 2.
John Price, J. S. Young, Jr. & Co. 3.
Bellmont— P. R. Fisher, Bell Bros. 1.
Rig, 1; wells drilling, 13; total, 14.

MARION COUNTY
Rig

Centralia—Homer Adams, Ohio Oil 2.

Wells Drilling

Marion—Homer, Ohio Oil 1.
Fannie McIntosh, James Oil 2.
A. W. Webster, Petro O. & G. 8, 9.
Rig, 1; wells drilling, 4; total, 5.

COLES COUNTY
Wells Drilling

Charleston—Earl Thrakill, Block Oil Corp. 1.
Ashmore—Luther Houghton, Shrider & Co. 1.
Wells drilling, 2.

DOUGLASS COUNTY
Well Drilling

Sargent—W. E. Brown, Douglass Oil 1.

FAYETTE COUNTY
Rig

Fayette—John Baxter, M. McCurdy & Co. 1.

EDWARDS COUNTY
Well Drilling

French Creek—Jas. M. Helm, Grayville Oil Synd. 1.

RANDOLPH COUNTY
Well Drilling

Sparta—McElory, Bill Goddard & Co. 1.

MADISON COUNTY
Well Drilling

Northeast of Bellville—Unknown 1.

McDONOUGH COUNTY
Wells Drilling

Plymouth—Colmar-Neil Thoreson, W. A. Evans 1.
M. H. Williams, Fisher & Co. 1.
C. B. Allison, Ohio Oil and Bacon 1.
Stoneking, unknown 3.
Wells drilling, 4.

INDIANA FIELD

Summary of Field Operations

District—	Comp.	Prod.	Dry	Rigs	Drg.	Ttl.
Wells	1	50	0	0	0	0
Jay	1	25	0	0	0	2
Adams	3	87	0	0	0	9
Huntington	0	0	0	0	0	1
Randolph	0	0	0	0	1	0
Gibson	2	0	2	0	0	2
Tike	2	85	1	0	1	6
Sullivan	3	0	2	1	0	1
Allen	0	0	0	0	1	3
Daviess	0	0	0	0	0	5
Knox	1	0	1	0	0	4
Jackson	1	0	1	0	0	0
Dubois	1	0	1	0	0	0
Shelby	0	0	0	0	0	1
Vigo	0	0	0	0	0	1
Warrick	0	0	0	0	0	1
Lagrange	0	0	0	0	0	1
Total June	16	247	8	1	3	37
Total May	17	203	7	0	5	33
Difference	1	44	1	1	2	4

WELLS COMPLETED
WELLS COUNTY

Nottingham—H. J. Heistand, John Say Oil 1 .. 50
G. Updegraft, H. Sharpe 16 .. abd

Wells completed .. 1
Production .. 50
Abandoned .. 1

JAY COUNTY

Bear Creek—L. D. Lowe, Central West O. & G. 1 .. 25

ADAMS COUNTY

Jefferson—Mary J. Niblick, Harmon & Co. 5 .. 50
Blue Creek—Joseph Sipe, Geo. S. Lacknett 1 .. 35
Schulte-Runyon, Schulte, Haney & Co. 4 .. 2

Wells completed .. 3
Production .. 87

DELAWARE COUNTY

Delaware—S. J. Ogle, A. M. Dearth Rec. 1, 2, 3, 4, 5 .. abd
Wm. Hitchen, A. M. Dearth Rec. 1, 2, 3, 4 .. abd
Niles—O. P. Bossman, A. M. Dearth Rec. 1 .. abd

Abandoned .. 10

GIBSON COUNTY

Barton—John Schmidtt, Gem Oil Corp 1 dry
Columbia—E. G. Rich, Cons. Oil Dev. 1 dry

Wells completed .. 2
Dry .. 2

PIKE COUNTY

Logan—Walter Miley, Skidmore Ints. 1 70
Clay—Stewart Bros., Murphy Oil 4 .. 15
Monroe—Parker-Wilson, Ohio Oil 2 .. dry
Oliver Mason, Murphy Oil 2 .. abd
John Cooper, Murphy Oil 1 .. abd

Wells completed .. 3
Production .. 85
Dry .. 1
Abandoned .. 1

SULLIVAN COUNTY

Turman—M. J. Baird No. 2, Ohio Oil 25 gas
C. B. Patton, Ohio Oil 2 .. dry
Hamilton—C. E. Gilbert, Bellman & Co. 1 .. dry

Wells completed .. 3
Dry .. 2
Gas .. 1

JACKSON COUNTY

Near Freetown—Unknown 1 .. dry

DUBOIS COUNTY

Cass—Meisener, Wheeler & Co. 1.

JAY COUNTY
Wells Drilling

Bear Creek—L. D. Lowe, Central West O. & G. 2.
Green—Ray Houck, Bloxome & Co. 1.
Wells drilling, 2.

ADAMS COUNTY
Wells Drilling

Jefferson—Wm. Smitley, Harmon & Watts 1.
Mary J. Niblick, J. H. Harmon & Co. 6.
Blue Creek—C. Jones, William King 4.
Joseph Sipe, Geo. S. Locknett 2.
Schulte—Schulte, Haney & Co. 5.
Monroe—Christ Stengle, Anderson & Christensen 1.
Wabash—Armstrong heirs, Chicago Oil 12.
J. S. Steiner, M. B. Daugherty & Co. 3.
Mrs. Dan Hawbacker, Frank & Arn 1.
Wells drilling, 3.

HUNTINGTON COUNTY
Well Drilling

Salamonie—Calvin Perdue, March Pet. 28.

RANDOLPH COUNTY
Rig

Green—W. Cline, T. O. Thorp 2.

GIBSON COUNTY
Wells Drilling

Barton—T. J. Parker, Gem Oil Corp. 3.
Washington—Jos. Armstrong, Bell Bros. & Co. 1.
Wells drilling, 2.

PIKE COUNTY
Rig

Logan—E. Beck, Alex Singer 2.

Wells Drilling

Logan—Wm. Miley, J. Morsey & Co. 1.
Sarah Shoaf heirs, Andrews & Burden 3.
G. Stewart, W. Darby & Co. 1.
Walter Miley, Skidmore Ints. 2, 3.
Clay—Claud Loveless, Bement Oil 3.
Stewart heirs, Murphy Oil 5.
Rig, 1; wells drilling, 6; total, 7.

SULLIVAN COUNTY
Wells Drilling

Gill—Sarah Vaughn, Fred Hays 1.

ALLEN COUNTY
Rig

Maumee—D. Helmke, Waterloo O. & G. 3.

Wells Drilling

Maumee—M. Roamake, Schuran Oil 1.
J. F. Butt, Estes, Manion & Co. 1.
W. Kammyer, Estes, Manion & Co. 1.
Rig, 1; wells drilling, 3; total, 4.

DAVIESS COUNTY
Wells Drilling

Veale—J. E. Peek, Commercial Prod. 1.
Unknown, Washington parties 1.
F. Gaither, Sargent, Hartman & Co. 5.
John Peek, Maple Oil 4.
Ragsdale, Logan Oil 2.
Wells drilling, 5.

KNOX COUNTY
Wells Drilling

Decker—Mussleman, Eastern Gulf Oil 1.
Nellie M. Orr, Eastern Gulf Oil 1.
Henry Sullivan, unknown 1.
Harrison—W. E. Harrison, Murphy Oil 4.
Wells, drilling, 4.

SHELBY COUNTY
Well Drilling

Van Buren—J. Harshbarger, L. N. Nicholson 1.

VIGO COUNTY
Well Drilling

Sugar Creek—Nattkemper, Welch, Flynn & Gambill 1.

WARRICK COUNTY
Well Drilling

Pidgeon—Vock & Folson, Turner O. & G. 1.

LA GRANGE COUNTY
Well Drilling

Howe—Howe O. & G. 1.

KENTUCKY-TENNESSEE

Summary of Field Operations

District—	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Warren	9	30	2	0	1	10	11
Allen	9	15	3	0	0	14	14
Barren	33	361	9	1	0	40	40
Owensboro	23	257	5	0	0	22	22
Cumberland-Monroe	13	1,404	3	0	3	8	11
Hopkins	1	8	0	0	0	0	0
Simpson	1	2	0	0	0	4	4
Green	1	0	0	1	0	1	1
Casey	0	0	0	0	1	1	2
Clinton	1	50	0	0	0	1	1
Wayne	7	7	4	0	0	4	4
Lee-Owsley	5	23	2	0	0	6	6
Lawrence-Johnson	19	135	0	0	3	15	18
Johnson-Magoffin	12	130	1	0	3	19	22
Floyd-Knott	6	50	1	1	0	6	6
Knox	0	0	0	0	0	3	3
Estill	5	23	2	0	0	5	5
Wolfe	2	8	0	0	0	1	1
Powell	0	0	0	0	0	1	1
Morgan	0	0	0	0	0	4	4
Elliott	1	3	0	0	1	2	3
Menifee	0	0	0	0	0	2	2
Laurel	0	0	0	0	0	1	1
Jackson	0	0	0	0	0	1	1
Greenup	0	0	0	0	0	1	1
Kentucky	148	2,506	32	6	12	172	184
Tennessee	1	0	1	0	1	19	20
Mississippi	0	0	0	0	5	9	14
Alabama	0	0	0	0	0	4	4
Florida	0	0	0	0	0	1	1
Total June	149	2,506	33	6	18	205	223
Total May	103	1,561	26	2	12	199	211
Difference	46	945	7	4	6	6	12

WELLS COMPLETED
WARREN COUNTY

Bowling Green—G. Davenport, No. 3, T. A. Sheridan 5 .. dry
Ed and Betty Bass, E. M. Treat & Co. 10 .. 5
E. G. Savage, Bull Bayou-Homer Oil 12 .. 2
E. G. Savage, Derby Oil 2 .. dry
O. G. Davenport 78, Onsel Bros. & Co. 7 .. 10
Mary Ferguson, Onsel Bros. & Co. 13 .. 3
J. W. Covington 8, Paul Cooksey 8 .. 2
J. M. Morgan, Brand & Henderson 6 .. 5
Savage, Zev Oil 4 .. 3

Wells completed .. 9
Production .. 30
Dry .. 2

ALLEN COUNTY

Scottsville—A. A. Davenport, Fred W. Owens 12 .. 3
A. A. Davenport, Fred W. Owens 13 .. 3
A. A. Davenport, Fred W. Owens 14 .. 2
A. A. Davenport, Fred W. Owens 15 .. 3
Jim Lewis, Mealy & Morris 1 .. dry
I. N. Rickman, Citizens Oil 17 .. 3
J. E. Pearson, Allen Oil Corp. 7 .. 1
B. R. Freeman, Parson & Reid 6 .. dry
Claud S. Haley, New Domain O. & G. 1 .. dry

Wells completed .. 9
Production .. 15
Dry .. 3

BARREN COUNTY

Glasgow—Bruton, Fred C. Moore 8 .. 6
Bruton, Fred C. Moore 9 .. 8
Bruton, Fred C. Moore 10 .. 25
W. E. Steffey, T. L. Gorby & Co. 5 .. dry
Mayfield, Houchins Leasehold 11 .. 8
Mayfield, Houchins Leasehold 12 .. 8
Mayfield, Houchins Leasehold 13 .. 8
W. E. Steffey, Ruby O. & G. 6 .. 26
H. W. Duff, Cons. Gas 23 .. 20
Hutcheson, Harrington & Norris Bros. 4 .. 4
Jones, Lew J. Emery, Jr., Sons 3 .. 10
Jones, Lew J. Emery, Jr., Sons 4 .. 10
Casady, Hiland O. & G. 17 .. dry
McGlochlin, J. W. Porter 17 .. 3
Hatfield, J. J. Sayre 2 .. 5
Jim Jones, Lew J. Emery, Jr., Sons 5 10
Dearing, R. A. Stohr 3 .. 10
Boyd Bros., Ziegler Bros. 2 .. dry
C. D. Boyd, Ziegler Bros. 5 .. 25
Richardson, Star O. & G. 3 .. dry
Richardson, Star O. & G. 5 .. 20
White, R. B. Tyler 7 .. 25
Richardson, Star O. & G. 6 .. 15
Pedigo, Norris Bros. 1 .. dry
Grady, Coombs & Co. 1 .. 20
Grady, Coombs & Co. 2 .. dry
C. B. Jones, Esslinger Oil 5 .. dry
C. B. Jones, Eslinger Oil 6 .. 50
C. B. Jones, Esslinger Oil 7 .. 50
Brite Wilson, R. A. Carpenter 1 .. gas
Burley Neeley, Lew J. Emery, Jr., Sons 3 .. dry
Nuckles, Lew J. Emery, Jr., Sons 1 .. dry
Unknown, Wood Oil 1 .. 1

Wells completed .. 33
Production .. 361
Dry .. 9
Gas .. 1
Volume gas, ft. .. 7,000,000

OWENSBORO DISTRICT
(Hancock-Ohio-Daviess Counties)

Owensboro—Laura Mercer, Penn-Indian Oil 4 .. 10
Laura Mercer, Penn-Indian Oil 5 .. 35
J. L. Phillips, Penn-Indian Oil 3 .. 20
C. A. Kelley, Penn-Indian Oil 2 .. 10
Holbrook 50-a, Penn-Indian Oil 1 .. dry
Guenther-Gant, W. F. Stevenson & Co. 1 .. dry
Dave King, Greasy Creek Oil 8 .. 4
R. B. Powers 40-a, Leeper Oil 3 .. 10
W. A. Probst, Leeper Oil 1 .. 10
Lon R. Helm, Leeper Oil 9 .. 20
Lon R. Holm, Leeper Oil 10 .. dry
Howe, Leeper Oil 7 .. 10
Wm. Coleman, White Plains O. & G. 1 dry
Orelia Ralph, White Plains O. & G. 2 10
Joe Bob Ellis, White Plains O. & G. 1 15
John Ward, White Plains O. & G. 2 .. 25
A. R. Brown, White Plains O. & G. 2 5
John W. Smith, Panther Creek Oil 11 10
John W. Smith, Panther Creek Oil 12 3
C. Roach, Tremor & Thompson 1 .. dry
Guenther-Gant, Chicago Pet. Synd. 5. 20
Guenther-Gant, Chicago Pet. Synd. 6. 15
Lucida E. Crowe, C.E. Daugherty & Co. 11 .. 25

Wells completed .. 23
Production .. 267
Dry .. 5

CUMBERLAND-MONROE COUNTIES

Sulphur Creek—A. A. Huddleston, Southern Producing 10 .. 5
J. Finley, Oil Fork Dev. 1 .. 100
Coop, Raydure & Son 5 .. 240
Judie Creek—H. Cloyd, Elbow Oil 1 dry
Whites Bottom—H. Flint, Martinsville O. & G. 1 .. 6
Crocus Creek—Harden Hadley, Baird & Hickman 1 .. dry
J. H. Morgan, Baird & Hickman 3 .. 50
F. Baker, Baird & Hickman 1 .. 750
E. H. Brockman, Wood-Haislet-McLennon 2 .. 240
Baker-Elliott, W. A. Haase 1 .. dry
Pulsey Creek—J. M. Hughes, McClintock, Reid & Co. 3 .. 5
J. M. Hughes, McClintock, Reid & Co. 4 .. 5
Kettle Creek—Carlie Scott, Hardly Able Oil 1 .. 3

Wells Completed .. 13
Production .. 1404
Dry .. 2

HOPKINS COUNTY

Nortonville—Holeman, Copper-Flash Oil 14 .. 8

SIMPSON COUNTY

Franklin—L. Wilkerson, Reagle, Clark & Co. 1 .. 2

GREENE COUNTY

Greensburg—Tucker, United Carbon 1 .. gas

CLINTON COUNTY

Albany—J. Upchurch, Clinton Oil 1 .. 50

WAYNE COUNTY

District 2—T. T. Davis, Vulcan Oil 17 .. 3
B. S. Huffaker, B. S. Huffaker 4 .. dry
Coffey heirs, Bell, Bell & Co. 3 .. 1
District 3—Kinnie-Waddle-Gibson, Beaver Pet. 5 .. dry
District 5—Coffey-Oatts, Abbot, Porter & Co. 4 .. 3
District 13—M. Fairchilds, E. M. Taybe & Co. 2 .. dry
Nancy L. Jones heirs, W. R. Souther 1 dry

Wells completed .. 7
Production .. 7
Dry .. 4

LEE-OWSLEY COUNTIES

District 16—E. L. Rogers, Superior Oil Corp. 12 .. 10
District 18—P. L. Warder, Fearless O. & G. 4 .. dry
District 35—McGuire heirs, C. M. Purdy 2 .. 3
H. D. Parrish, H. B. Sipple 3 .. dry
Dave Mays, Hupp, Duff & Co. 14 .. 10

Wells completed .. 5
Production .. 33
Dry .. 2

LAWRENCE-JOHNSON COUNTIES

District 22—R. N. Sparks No. 2, Swiss Oil Corp. 9 .. 5
C. E. Fraley, Swiss Oil Corp. 15 .. 6
R. N. Sparks No. 2, Swiss Oil Corp. 10 5
L. T. Sparks No. 2, Garrison & Townsend 9 .. 3
W. W. Bailey, Garrison & Townsend 5 5
L. M. Hay, Garrison & Townsend 5 .. 5
L. M. Hay, Garrison & Townsend 6 .. 4
John M. Sparks, Holland & Wade 4 .. 6
J. D. Bond, J. T. Hare & Son 3 .. 6
District 22-a—Herbert Skaggs, Swiss Oil Corp. 8 .. 5
Sanford Lyon, Swiss Oil Corp. 30 .. 20
Martha Kelley, Swiss Oil Corp. 14 .. 8
Osborne, Skaggs, Miller & Co. 1 .. 4
Jesse Lyons, Keaton O. & G. 32 .. 10
District 32—P. P. Holbrook, Swiss Oil Corp. 41 .. 10
P. P. Holbrook, Swiss Oil Corp. 42 .. 5
J. J. Gambill, Swiss Oil Corp. 42 .. 10
J. J. Gambill, Swiss Oil Corp. 43 .. 10
District 33—J. M. Fyffe, Swiss Oil Corp. 19 .. 8

Wells completed .. 19
Production .. 135

JOHNSON-MAGOFFIN COUNTIES

District 25—Gordon Blanton, Atlantic Oil 20 .. 10
District 27—Sam Williams, S. J. Patrick 1 .. dry
District 29—Brack Borders, C. C. Bosworth 1 .. 1
Yearns Hale, R. G. Gillespie Est. 2 .. 12
J. D. Adams, R. G. Gillespie Est. 2 .. 2
District 31—J. H. Arnett, Bed Rock Pet. 22 .. 20
John M. Adams, Elkhorn Coal Co. .. 7
H. H. May, South Fork Oil 8 .. 25
District 30—Wm. M. Blanton, Conley Bros. 2 .. 5
F. M. Tackett, F. M. Tackett 1 .. 10
Pelphrey heirs, Pelphrey heirs 1 .. 3

Well Shooting by Experts

Phone one of these men for your next shot.

OKLAHOMA

TULSA—Office—2-6743.
Garage—8776.
D. A. Koons—2-6284.
W. H. Swartz—2-8431.
J. A. Balcam—7441.
Willis Hill—7889.
C. C. Eshleman—2-8205.
J. H. Hashburger—3-0660.
DRUMRIGHT—P. W. Burdette, 424
OKMULGEE—Geo. S. Eba, 654.
CLEVELAND—R. G. Camblin, 154.
THREE SANDS—(Tonkawa)—W. F. Knode, 826-F23.
CROMWELL—53.
WEBB CITY—R. C. Woods, 26.

TEXAS

BRECKENRIDGE—Roy Richardson, 127.
MINGUS—C. L. McKinney, 56.
COLORADO—Garry Young, 125.
PANHANDLE—Lee H. Vandell, 217
R. C. Woods—217.

KANSAS

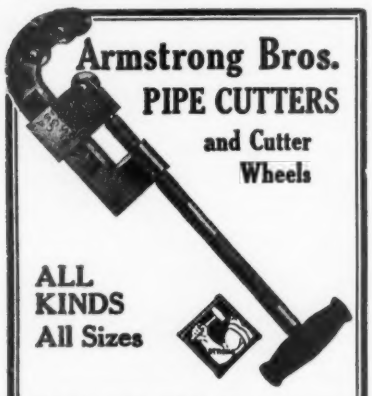
GARNETT—M. H. Scott, 404.

NEW MEXICO

ARTESIA—F. H. Dixon, 83-17.

We also operate stations at Bowling Green, Glasgow and Owensboro, Kentucky

THE EASTERN TORPEDO of Ohio COMPANY
412 Palace Building
TULSA, OKLA.



Armstrong Bros.
PIPE CUTTERS
and Cutter Wheels

ALL KINDS
All Sizes

Equipped with Armstrong Bros. Improved Knife Blade Cutter Wheels made from ALLOY TOOL STEEL.

Write for free catalog

ARMSTRONG BROS. TOOL CO.
333 No. Francisco Ave. Chicago, U.S.A.

THOMAS D. LYONS
ATTORNEY AT LAW
Rooms 427-428
Mayo Bldg.
Phone 2-3934

HELP WANTED
Excellent positions are available to readers of the Classified Wants Section. See the advertisements on Page 133.

Gallen Lemaster, Ralph Stafford & Co. 1 2

Wells completed 12
Production 130
Dry 1

FLOYD-KNOTT COUNTIES

District 21—Elkhorn Coal, Ohio Fuel Oil 5 . . . . . gas
T. Martin, Louisville G. & E. 4 . . . . gas
S. C. Allen, Eastern Carbon Black 1 . 50
S. C. Allen No. 1, Eastern Carbon Black 4 . . . . . dry
Jack Turner heirs, Eastern Carbon Black 3 . . . . . gas
Joe Hall, Hope Construction & Rfg. 1 gas

Wells completed 6
Production 50
Dry 1
Gas 4

ESTILL COUNTY

District 7—Perry Hall, C. O. Amsler & Co. 13 . . . . . dry
District 8—S. M. Maple, Reno Oil 6 . . . 7
E. Alexander, Superior Oil Corp. 1 . . dry
Simp Horn, Superior Oil Corp. 7 8
Simp Horn, Superior Oil Corp. 8 8

Wells completed 5
Production 23
Dry 2

WOLFE COUNTY

District 6—Spencer heirs, Petroleum Exploration 3 5
T. J. Elam, Popping Rock Oil 1 3

Wells completed 2
Production 3

ELLIOTT COUNTY

District 34—John Dials, Eldra Lee O. & G. 5 3

TENNESSEE

OVERTON COUNTY

Livingstone—Windle, Duncan & Co. 1 . . dry

WARREN COUNTY
Rig

Bowling Green—Worden, C. B. Tannehill 2.

Wells Drilling

Bowling Green—Keller, Al F. Haynes 1.
Covington Block 7, Wm. Zimmer 10.
Manning, Gold Flash Oil 4.
C. H. Daugherty, F. F. Blanchard 1.
N. L. Miller, Petroleum Exploration 1.
James Deathridge, A. B. Hudson Atty. 3.
J. Q. Adams, Palmer Corp. 4.
Ben Price, Lowman & Bolling 7.
J. T. Vance, Dr. Cauble Atty. 5.
Vic Chaney, Hogan & Co. 1.
Rig, 1; wells drilling, 10, total, 11.

ALLEN COUNTY
Wells Drilling

Scottsville—W. M. Hall, Reaher & Co. 1.
Lee Moore, Lee Moore 6.
John Farley, Reaher & Co. 1.
Ike Hill, F. J. Tapp 11.
Phoebe Oliver, American Natl. Bank 14.
Earl Oliver, M. S. Haile & Co. 2.
Lon Oliver, Cyphus & Harley 5.
S. & K. Thratton, Vic DeCaigney 7.
E. Newman, Bastrus & Co. 3.
Angel Meredith, G. W. Hahn 11.
A. A. Davenport, Fred W. Owen 16.
Frank Gibson, O. M. Widdowson 4.
I. H. Rickman, Citizens Oil 18.
J. W. Frost, W. G. Mooreman Rec. 12.
Wells drilling, 14.

BARREN COUNTY
Wells Drilling

Emery-Moore Pool—Marshall, Unknown 1.
Pitcock, Houchins Leasehold 20.
Ziegler, Houchins Leasehold 13.
Mayfield, Houchins Leasehold 14.
Wilson, Phillip Kopel 2.
W. E. Steffey, Ruby O. & G. 6.
Howard, Fred C. Moore 12.
Hall Baker Pool—R. E. Evans, Harrington & Norris Bros. 12.
Hall Baker, Cons. Gas 10.
Hutcherson, Wood Oil 1.
Gorby Pool—Richardson, Richardson Farm Oil 4. 5.
Richardson, Lew J. Emery, Jr., Sons 3.
Dickens, Lew J. Emery, Jr., Sons 3.
Jim Jones, Lew J. Emery, Jr., Sons 6.
Everette, Kopel Oil 2.
Whitney, Wood Oil 1.
Ralston, Sanson & Bowers 1.
Carver, Ziegler Bros. 1.
Dearing, Watson Oil 3.
Sanders, Jacob Best Trustee 6.
T. L. Gorby, Helper & Gorby 6.
McGlouchlin, J. W. Porter 18.
Casady, Hiland O. & G. 18.
Lessenberry, T. L. Gorby & Co. 3.
W. D. Beals, Hiland O. & G. 1.
Beaver Creek Pool—Maddox heirs, Harrington & Norris Bros. 2.
Duff, Consolidated Gas 13.
Knob Road District—C. D. Boyd, Zeigler Bros. 6.
White, R. B. Tyler 8.
Harrison, Wiggins & Gillespie 2.
Richardson, Star O. & G. 7.
Lecta Pool—Spencer, Wiggins & Gillespie 1.
C. B. Jones, Esslinger Oil 8.
Bunch, Lew J. Emery, Jr., Sons 1.
Grady, Coombs & Co. 3.
Tompkinsville Road—Mattis, Baker & Co. 1.
Richardson Pool—Davidson, Houchins Leasehold 4.
Riley Scrimiger, Wm. Christian 1.
Oil City Pool—Allen, Lew J. Emery, Jr., Sons 1.
Wells drilling, 40.

OWENSBORO DISTRICT
(Hancock-Ohio-Daviess Counties)
Wells Drilling

Owensboro—J. L. Trogden, Johnson & Engle 1.
Will Howard, Petroleum Extraction 1.
J. W. McDaniel, Petroleum Extraction 1.
O. T. Burdette, Victor Oil 8.
Cicero Whitteinhill, Lew J. Emery, Jr., Sons 1.
J. A. Greer, Leeper Oil 1.
J. S. Collier, Leeper Oil 1.
Leeper, Clarence A. Leeper 2.
W. S. Gabbard, Bert Thompson 3.
J. L. Smith, Rex-Pyramid Oil 1.
Laura Mercer 108-a, Penn-Indiana Oil Synd. 2.
Laura Mercer 84-a, Penn-Indiana Oil Synd. 6.
W. Griffith, Penn-Indiana Oil Synd. 2.
Joe Bob Ellis, White Plains O. & G. 2.
Orella Ralph, White Plains O. & G. 3.
Howard, White Plains O. & G. 1.
J. J. Midkiff, White Plains O. & G. 4.
Drane & Owen, Wood Oil 1.
J. Bob Ellis, J. W. Loman Atty. 3.
Guenther-Gant, Chicago Pet. Synd. 7.
Oat-Neal, C. E. Daugherty & Co. 2.
M. Coleman, Tremor & Thompson 1.
Wells drilling, 22.

CUMBERLAND-MONROE COUNTIES
Rigs

Crocus Creek—Sand Lick, Berthold & Waddie 1.
F. Baker, Baird & Hickman 2.
E. H. Brockman, Wood-Haislett-McLennon 3.

Wells Drilling

Sulphur Creek—Davidson, Wilcox Bros. 1.
J. B. Riddle, Hook & McComas 2.
Williams Prong—J. A. Melton, Wilcox Bros. 4.
West Fork—C. T. Cheatam, Alta Oil 2.
Crocus Creek—Fulton Grider, Baird & Hickman 3.
Patterson, Phillipi & Co. 1.
H. Jackman, Crawford & Webster 1.
Morgan No. 1, Crawford & Co. 1.
Rigs, 3; wells drilling, 8; total, 11.

SIMPSON COUNTY
Wells Drilling

Franklin-Hogan, Small & Tully 11.
Slate, Slate Bros. 3.
John Price, McMullen & Reagle 3.
Holeman, Lincoln Oil Producing 3.
Wells drilling, 4.

GREENE COUNTY
Wells Drilling

Greensburg—Curry, T. S. Curry 1.

CASEY COUNTY
Rig

Near Avon—T. B. Hammonds, Col. Less Combest 1.

Well Drilling

Dunville—Ben Russell, Irwin & Aneschutz 1.
Rig, 1; well drilling, 1; total, 2.

CLINTON COUNTY
Well Drilling

Modoc—J. A. Dicken, E. M. Treat & Co. 3.

EASTERN DIVISION

WAYNE COUNTY
Wells Drilling

District 2—T. T. Davis, Vulcan Oil 18.
District 3—Burnett heirs, D. C. Atkins 5.
District 13—Nancy L. Jones heirs, W. L. Souther 2.
Oil Valley—Dabney, Wood Oil 1.
Wells drilling, 4.

LEE-OWSLEY COUNTIES
Wells Drilling

District 18—Flahaven Land, Ohio Oil 82.
Wylie Bryant, Cook & Co. 2.
District 35—Jack Evans, Coombs Bros. Dev. 3.
District 36—Thos. Foreman, Rex-Pyramid Oil 1.
Thos. Foreman, Standard Oil of Ky. 1.
Baker, Watkins & Co. 1.
Wells drilling, 5.

LAWRENCE-JOHNSON COUNTIES
Rigs

District 32—J. J. Skaggs, Cumberland Petroleum 4.
Robt. Fyffe, Pluto Oil 6.
District 33—Ira Lester, W. M. Stone & Co. 11.

Wells Drilling

District 22—Caney Sparks, Swiss Oil Corp. 11.
John M. Sparks, Holland & Wade 5.
W. W. Bailey, Garrison & Townsend 6.
L. M. Hay, Garrison & Townsend 7.
District 22-a—C. K. Dobyne No. 1, Swiss Oil Corp. 20.
Martha Kelley, Swiss Oil Corp. 15.
Jess Lyons, Keaton O. & G. 33.
District 32—Estra Walters, Wheeler-Watkins O. & G. 2.
P. P. Holbrook, Swiss Oil Corp 43.
J. J. Gambill, Swiss Oil Corp. 44.
District 33—Geo. Evans, Swiss Oil Corp. 18, 19
J. M. Fyffe, Swiss Oil Corp. 20.
Nora Lemaster, J. N. Meek Trustee 4.
Blaine District—Devils Fork, W. E. Schwartz 1.
Rigs, 3; wells drilling, 15; total, 18.

JOHNSON-MAGOFFIN COUNTIES
Rigs

District 25—W. H. Collins, Pet. Explor. 3.
District 27—Eliza Powers, Clyde Oil 6.
Bailey heirs, Cobb & Lucas 7.

Wells Drilling

District 25—Gordon Blanton, Atlantic Oil 21.
District 27—Cholly Conley, Ky.Ind. Oil Trust 7.
Ben McCormick, Burton Fork Oil 9.
District 29—W. H. Conley, Bed Rock Pet. 30.
Mary Burke, R. G. Gillespie Est. 7.
A. A. Almy, Cumberland Pet. 7.
Oscar Wheeler, Hudson & Collins 10.
District 31—W. E. Patrick, Bed Rock Pet. 5.
J. H. Arnett, Bed Rock Pet. 23.
Salyer heirs, Oliver Jenkins 5.
B. F. Whitt, Hupp, Duff & Co. 1.
John M. Adams, Elkhorn Coal 3.
H. H. May, South Fork Oil 9.
District 30—Kelley Owens, Wilson Oil 4.
Sam Blanton, R. G. Gillespie Est. 20.
Lee Owens, Oliver Jenkins 2.
Bracken heirs, Phillips & Yough 4.
F. M. Tackett, F. M. Tackett 2.
Pelphrey heirs, Pelphrey heirs 2.
Rigs, 3; wells drilling, 19; total, 22.

FLOYD-KNOTT COUNTIES
Wells Drilling

District 21—Mouse Martin, Ohio Fuel Oil 3.
Mary Martin, Louisville G. & E. 3.
A. J. Allen, New Orleans O. & G. 5.
T. G. Martin, Midas Oil 4.
John Amburgy, Distill-Martin O. & G. 1.
S. C. Allen, No. 2, Eastern Carbon Black 2.
Wells drilling, 6.

KNOX COUNTY
Wells Drilling

Bailey Switch—Dizney, Dizney & McKee 1.
Red Bird Creek, Beattyville Parties 1.
Sinking Creek—Fee, Foreman Lumber 1.
Wells drilling, 3.

ESTILL COUNTY
Wells Drilling

District 7—D. N. Witt, R. Denton & Co. 11.
John Bill Rogers, Mt. Spring Oil 14.
District 8—S. M. Maple, Reno Oil 7.
Millard Ballard, Reno Oil 8.
Simp Horn, Superior Oil Corp. 9.
Wells drilling, 5.

WOLFE COUNTY
Wells Drilling

District 6—Miller-Pruitt-Goff, Pet. Exploration 13.

POWELL COUNTY
Wells Drilling

District 15—John A. Rogers, W. O. Dunham 5.

MORGAN COUNTY
Wells Drilling

West Liberty—Pleasant Run, Jim Patton 1.
Blair Mills, Collier & Co. 1.
District 6—Lenox Sawmill, W. B. Sandifer Trustee 1.
T. L. Elem, Popping Rock Oil 2.
Wells drilling, 4.

ELLIOTT COUNTY
Rig

District 34—D. A. Lewis, Smith & Garrison 2.

Wells Drilling

District 34—J. M. Ison, Edra Lee O. & G. 3.
Lincoln Creek—Joe Wagner, J. M. McDonald 1.
Rig, 1; wells drilling, 2; total, 3.

MENIFEE COUNTY
Wells Drilling

Leatherwood—Widow Reed, McKinney Bros 1.
Hamp Rawlins, W. O. Beach 3.
Wells drilling, 2.

LAUREL COUNTY
Well Drilling

London—Standard Oil of Ky. 1.

JACKSON COUNTY
Well Drilling

McKee—Isaac, Standard Oil of Ky. 1.

GREENUP COUNTY
Well Drilling

Greenup—J. H. Flannery, Pet. Explor. 1.

TENNESSEE

CLAY COUNTY
Rig

Celina—Unknown, J. H. McClurkin & Co. 1

Wells Drilling

Celina—Lanford, Miller Bros. 1.
Geo. Plumley, John B. Kerr 1.
Geo. Tinsley, Lewis & George 1.
Clark Pool—Thurman, H. Z. Clark & Co. 2.
A. T. Davis, Dixon, Bayless & Douglas 3.
Turkey Creek—Potter, Mendenthall Bros. 1.
Pea Ridge—Kerr, Foster Mitchell & Co. 1.
Willow Grove—Widow Hargrave, Carnahan Oil 1.
Jim Stover, A. A. Alexander & Co. 3.
Lower Kettle Creek—Riley Kerr, Comstock & Findley 1.
Tinsley Bottom—Hamp Lynn, Dafoe & Co. 9.
Williams, Dafoe & Co. 3.
Rig, 1; wells drilling, 12; total, 13.

JACKSON COUNTY
Well Drilling

Near Granville—Bartlett, W. W. Bentley & Co. 3.

MORGAN COUNTY
Wells Drilling

Sunbright—Somers, Cockrell & Co. 1.
Glades, Knoxville Parties 1.
Fee, Russell Producing Co. 7.
Wells drilling, 3.

OVERTON COUNTY
Wells Drilling

Monroe Anticline—A. H. Helsey Gas & John Elder 1.
Copeland Cove Anticline—H. R. Guard 1.
Wells drilling, 2.

PUTNAM COUNTY
Well Drilling

N. E. Cookville—Rippitol, Clark & Green 1.

MISSISSIPPI

FRANKLIN COUNTY
Rig

Jackson—Pear River, New York parties 1.

COPIAH COUNTY
Rig

Hazelhurst—Brandywine, B. W. White 1.

HOLMES COUNTY
Rig

Coxburg—Section 18-13-1, Freeun Oil 1.

LEAKE COUNTY
Rig

Near Conway—Chas. N. Haskell 1.

KOSCIUSKI COUNTY
Rig

At Alta—B. B. Jones 1.

CLAIBORNE COUNTY
Wells Drilling

Section 5-11-2—Young, Mississippi Explor. 1.
West Side County—Michael, Zink 1.
Wells drilling, 2.

YAZOO COUNTY
Well Drilling

Section 25-13-1w—Reed, Willis & Burns 1.

HINDS COUNTY
Well Drilling

Jackson—Reeder, Johnson Oil 1.

WASHINGTON COUNTY
Well Drilling

Section 30-14-9—Glen Allens—Williams, Alhambra Oil 1.

TISHIMINGO COUNTY
Well Drilling

Iuka—Unknown parties 1.

TALLAHATCHIE COUNTY
Well Drilling

Section 23-25-2—Harvey, Shreveport parties 1.

MARSHALL COUNTY
Well Drilling

Section 3-32-3—Hoffman, Tom B. Slick 2.

MADISON COUNTY
Well Drilling

Unknown—Transcontinental Oil 1.
Rigs, 5; wells drilling, 9; total, 14.

ALABAMA

MORGAN COUNTY
Well Drilling

Section 6-6-4—English, Decatur Oil 1.

HALE COUNTY
Well Drilling

Greensburg—Hale Oil 1.

SHELBY COUNTY
Well Drilling

Chelsea—Scott, Cooksey Oil 1.

WILSON COUNTY
Well Drilling

Selma—Blue Belle Oil 1.

FLORIDA

POLK COUNTY
Well Drilling

West Frostproof—West Frostproof L. & O. 1.

WHAT AND WHERE TO BUY

A Classified Index of Advertisers in This Publication

For Alphabetical Index See Page 25

A

Absorption Plant Equipment—
American Radiator Co.
Braun, C. F., & Co.
Campbell, J. A.
Cooper, C. & G., Co.
Griscom-Russell Co.
National Gas Products Co.
Newton Process Mfg. Co.
Ross Heater & Mfg. Co., Inc.
Southwestern Engineering Co., Inc.
Southwestern Engineering Corp.

Absorption Towers—
Hope Engineering & Supply Co.
National Gas Products Co.
Newton Process Mfg. Co.

Acetylene Apparatus—
Oxweld Acetylene Co.

Acetylene—Dissolved—
Prest-O-Lite Co., Inc.

Acetylene in Cylinders—
Prest-O-Lite Co., Inc.

Agitators—
Chicago Bridge & Iron Works.
Kaw Steel Construction Co.
Petroleum Iron Works Co.

Alloy Steel (See Steel—Alloy)—

All-Steel Drilling Rigs (See Rigs)

Aluminum Bronze Powder for Paint—
Aluminum Co. of America.

Ammonia—
Mathieson Alkali Works, Inc.

Anchor Clamps (See Clamps)—

Antimonial Leads—
Eagle-Picher Lead Co.

Apparatus—Electric—
Westinghouse Electric & Mfg. Co.

Apparatus—Motor Control—
Westinghouse Electric & Mfg. Co.

Appraisers—
American Appraisal Co.

Arches—Flat Suspended—
Brady Conveyor Corp.

B

Babbitts—
Eagle-Picher Lead Co.
Ryerson, Jos. T., & Sons, Inc.

Back Up Tongs (See Tongs)—

Bailers—
Oil Well Supply Co.
Spang & Co.

Balls and Seats—
Axelson Machine Co.
Hough, Charles N., Mfg. Co.
Norris Brothers, Inc.
Northrup Equipment Co.

Balls—Bronze—
Atlas Ball Co.
Hoover Steel Ball Co.

Balls—Steel—
Atlas Ball Co.
Hoover Steel Ball Co.
Strom Steel Ball Co.

Band Wheels—Steel—
International Derrick & Equipment Co.
Marion Mch., Fdy. & Supply Co.
Moore, Lee C., & Co., Inc.
Parkersburg Rig & Reel Co.

Barrels—
Petroleum Iron Works Co.

Batteries—
National Carbon Co.

Bearings—Roller—
American Roller Bearing Co.
Timken Roller Bearing Co.

Bearings—Thrust—
Timken Roller Bearing Co.

Belting—
Bridgeport Machine Co.
Continental Supply Co.
Fenwick-Reddaway Mfg. Co.
Frick-Reid Supply Co.
Imperial Belting Co.
International Supply Co.
Murray Rubber Co.
Stanley Belting Corp.

Belting—Rubber—
Bovaird Supply Co.
Goodyear Tire & Rubber Co.
United States Rubber Co.

Bits—Disc—
U. S. Tool Co.

Bits—Fish Tail—
Federal Supply Co.
Lucey Mfg. Corp.

Bits—Rotary Disc—
Hughes Tool Co.

Bits—Rotary Rock—
Hughes Tool Co.
Reed Roller Bit Co.

Bit Steel (See Steel—Bit)—

Bleaching Powder—
Mathieson Alkali Works, Inc.

Blow-Off Valves (See Valves)—

Blowout Preventer—
Regan Forge & Engineering Co.
Stearns-Roger Mfg. Co.

Blowpipes—
Oxweld Acetylene Co.

Boiler Feed Pumps (See Pumps)

Boilers—Horizontal Return Tubular—
Brownell Co., The
Kewanee Boiler Co.
Vogt, Henry, Machine Co.

Boilers—Oil Country—
Bovaird & Seyfang Mfg. Co.
Bridgeport Machine Co.
Brownell Co., The
Coatesville Boiler Works.
Continental Supply Co.
Donovan Boiler Works.
Frick-Reid Supply Co.
International Supply Co.
Kewanee Boiler Co.
Lucey Mfg. Co.
National Supply Co.
Oil Well Supply Co.
Pattin Bros. Co.
Republic Supply Co.
Titusville Iron Works.

Bolted Tanks (See Tanks)—

Bolts and Nuts—
Sheffield Steel Corp.

Bolt Threading Machines—
Landis Machine Co.

Bottles—Glass—
Illinois Glass Co.

Box and Pin Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

Braces—Tool—
Dunn Mfg. Co.

Briquette Machines—
Porter & Company.
Simplex Equipment Co.

Bronze Valves (See Valves—Brass and Bronze)—

Buildings—Metals, Sectional (All Types)—
Austin Co.
Blaw-Knox Co.
Braden Co.
Butler Mfg. Co.
International Derrick & Equipment Co.
Marion Mch., Fdy. & Supply Co.
Truscon Steel Co.

Bulk Station Tanks (See Tanks)—

Bull Ropes—
Ajax Rope Co.
Columbian Rope Co.
Plymouth Cordage Co.
Wall Rope Works, Inc.

Bull Wheels—Steel—
International Derrick & Equipment Co.
Marion Mch., Fdy. & Supply Co.
Moore, Lee C., & Co., Inc.
Parkersburg Rig & Reel Co.

Burners—Gas—
Eureka Burner Co.
Okmulgee Boiler & Welding Works.

Burners—Oil—
Continental Supply Co.
Reid, Joseph, Gas Engine Co.

Bushings—Rotary Drive—
Wilson Oil Tools Corp.

C

Cable Bit Steel—
Andrews Steel Co.
Federal Supply Co.
Heppenstall Forge & Knife Co.

Cables—Drilling, Manila—
Ajax Rope Co., Inc.
Columbian Rope Co.
Continental Supply Co.
Frick-Reid Supply Co.
Plymouth Cordage Co.
Wall Rope Works, Inc.

Cables—Steel—
Ajax Rope Co., Inc.
American Cable Co.
Black Steel & Wire Co.
Broderick & Bascom Rope Co.
Continental Supply Co.
Frick-Reid Supply Co.
Hazard Mfg. Co.
Leschen, A., & Sons Rope Co.
Murray Tool & Supply Co.
National Supply Co.
Republic Supply Co.
Wickwire-Spencer Steel Corp.
Williamsport Wire Rope Co.

Calf Rope—
Ajax Rope Co., Inc.

Calf Wheels—Steel—
International Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Cannon—Oil Field—
Braden Co.

Cans—Water—
Gott, H. P., Mfg. Co.

Capping Steel—
Andrews Steel Co.

Carbon—Black Diamond—
Diamond Drill Carbon Co.
Patrick, R. S.

Cars—Tank—
American Car & Foundry Co.
General American Tank Car Corp.
Shippers' Car Line, Inc.

Cars—Tank, Leased—
American Car & Foundry Co.
North American Car Co.
Shippers' Car Line, Inc.

Casings—
Bovaird Supply Co.
Central Tube Co.
Continental Supply Co.
Emsco Derrick & Equip. Co.
Jarecki Mfg. Co.
National Supply Co.
National Tube Co.
Republic Iron & Steel Co.
South Chester Tube Co.
Spang, Chalfant & Co., Inc.
Superior Tube Co.
Wheeling Steel Corp.

Casing—Wrought Iron—
Byers, A. M., Co.
South Chester Tube Co.

Casing Elevators (See Elevators, Casing and Tubing)—

Casing Heads—
Arbon, Paul, & Co.
Dresser, S. R., Mfg. Co.
Kansas City Hay Press Co.
Oil Well Improvements Co.

Casing Lines—
Ajax Rope Co., Inc.
Hazard Mfg. Co.

Casing Shoes—
Baker Casing Shoe Co.
Bartlesville Supply Co.
Bridgeport Machine Co.
Gulberson Corp.
Oil Well Supply Co.

Castings—Alloy Steel—
Ohio Steel Foundry Co.
Sivyer Steel Casting Co.

Castings—Brass—
Progressive Brass Mfg. Co.

Castings—Chrome Nickel Steel—
Sivyer Steel Casting Co.

Castings—Corrosion Resisting Non-Ferrous—
Hills-McCanna Co.

Castings—Electric Steel—
Ohio Steel Foundry Co.
Sivyer Steel Casting Co.

Castings—Grey Iron—
Ajax Iron Works.
American Car & Foundry Co.
Gaso Pump & Burner Mfg. Co.
Pittsburgh Boiler & Machine Co.

Castings—Steel—
Ajax Iron Works.
Chicago Steel Foundry Co.
Ohio Steel Foundry Co.
Sivyer Steel Casting Co.

Cement—Fire and High Temperature—
Botfield Refractories Co.
General Insulating & Mfg. Co.

Chains—Conveying—
Chain Belt Co.
Link-Belt Co.

Chains—Oil Well—
Baldwin Chain & Mfg. Co.
Link-Belt Co.

Chains—Power Transmission—
Baldwin Chain & Mfg. Co.
Chain Belt Co.
Link-Belt Co.

Chemical Treatment Crude Oil Emulsion—
Barnickel, Wm. S., & Co.

Chlorine—Liquid—
Mathieson Alkali Works, Inc.

Circulating Heads—
Wilson Oil Tools Corp.

Clamps—Anchor—
Bartlesville Supply Co.

Clamps—Belt—
Federal Supply Co.

Clamps—Collar Leak—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.

Clamps—Drilling—
Western Supply Co.

Clamps—Hoisting—
Newton Process Mfg. Co.

Clamps—Pipe—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.
Wheatley Bros. Machine Works.

Clamps—River—
Dresser, S. R., Mfg. Co.
Gaso Pipe & Burner Mfg. Co.

Cloths—Wiping—
Nye Tool & Machine Works.

Clutches—Friction, Plate Type—
Twin Disc Clutch Co.

Cocks—Brass & Iron—
Lunkenheimer Co.
Walworth Co.

Cocks—Plug—
Homestead Valve Mfg. Co.

Cocks—Water Gauge—
Shaffer, J. E., Co.
Smith Separator Co.

Coils and Bends—Pipe—
Harrisburg Pipe & Pipe Bending Co.
Midwest Piping Supply Co.

Compounds—Boiler—
Dearborn Chemical Co.

Compounds—Cement Quick Setting—
Sullivan Co.

Compounds—Joint Sealing—
Key Boiler Equipment Co.

Compounds—Oil Well Cleaning—
Sullivan Co.

Compressed Air Process—
Air Cleaning & Reaming Corp.

Compressor Cylinders (See Cylinders—Compressor)—

Compressors—Air—
Bessemer Gas Engine Co.
Clark Brothers Co.
Cooper, C. & G., Co.
Gardner Governor Co.
Ingersoll-Rand Co.
Sullivan Machinery Co.

Compressors—Ammonia—
Carbondale Machine Co.
Cooper, C. & G., Co.

Compressors—Direct Connected Motor and Gas Engine Driven
Buffalo Gasolene Motor Co.
Clark Brothers Co.
Cooper, C. & G., Co.
Miller Improved Gas Engine Co.

Compressors—Direct Driven Air and Gas—
Bessemer Gas Engine Co.
Miller Improved Gas Engine Co.

Compressors—Gas—
Bessemer Gas Engine Co.
Chicago Pneumatic Tool Co.
Clark Brothers Co.
Cooper, C. & G., Co.
Hope Engineering & Supply Co.
Ingersoll-Rand Co.
National Transit Pump & Machine Co.
Worthington Pump & Machinery Corp.

Compressors—Oil—Coke—
Porter & Company.

Condenser Boxes—
Kaw Steel Construction Co.
Petroleum Iron Works Co.

Condensers—
American Radiator Co.
Chicago Pneumatic Tool Co.
National Gas Products Co.
Ross Heater & Mfg. Co.
Southwestern Engineering Co., Inc.
Southwestern Engineering Corp.

Controllers—Automatic—
Brown Instrument Co.

Controllers—Liquid Level—
Fisher Governor Co., Inc.
Newton Process Mfg. Co.
Smith Separator Co.

Controllers—Pressure—
Smith Separator Co.

Controllers—Temperature—
Foxboro Co., Inc.

Conveying & Elevator Machinery
Brady Conveyors Corp.

Conveyors—Bucket and Belt—
Brady Conveyors Corp.

Conveyors—Pneumatic—
Brady Conveyors Corp.

Conveyors—Portable Belt—
Barber-Greene Co.

Cooling Towers—Atmospheric—
Braun, C. F., & Co.
National Gas Products Co.

Cordage—
Bridgeport Machine Co.
International Supply Co.
Plymouth Cordage Co.

Core Drilling—
Longyear, E. J., Co.
Mineral Exploration Co.

Core Drills—
Elliott Core Drilling Co.

Core Drills—Diamond—
Longyear, E. J., Co.
Sullivan Machinery Co.

Coring Tools—
Reed Roller Bit Co.
Wilson Oil Tools Corp.

Couplings—Flexible—
Nuttall, R. D., & Co.
Victaulic Co. of America.

Couplings—Plain End Pipe—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.

Couplings—Seamless Steel—
Harrisburg Pipe & Pipe Bending Co.
Superior Tube Co.

Couplings—Steel for Casing, Line Pipe, Drill Pipe and Tubing—
Dayton Pipe Coupling Co.
Smith, A. O., Corp.

Cracking Processes—
Graver Corp.
Kellogg, M. W., Co.
Universal Oil Products Co.

Crawler Treads—
Belle City Mfg. Co.
Full Crawler Co.

Crown Blocks—
International Derrick & Equipment Co.
Lucey Mfg. Corp.
Moore, Lee C., & Co., Inc.
Parkersburg Rig & Reel Co.

Cups—Composition—
Williamsport Development Co.

Cups—Leather—
Auer, C. A.

Cutters—Pipe—
Borden Co.
Nye Tool & Machine Works.
Trimont Mfg. Co.

Cylinders—Compressor—
Hope Engineering & Supply Co.

Cylinder Stocks—
Barnsdall Refining Co.
Pure Oil Co.
Texas Company, The.

D

Dehydrating Process—
Barnickel, Wm. S., & Co.

Dephlegmators—
Graver Corp.
National Gas Products Co.
Newton Process Mfg. Co.
Smith, A. O., Corp.

Depletion Reports—
American Appraisal Co.

Derricks—Steel—
Emsco Derrick & Equip. Co.
International Derrick & Equipment Co.
Marion Mch., Fdy. & Supply Co.
Moore, Lee C., & Co., Inc.
O'Brien Steel Construction Co.
Parkersburg Rig & Reel Co.
Superior Tube Co.

Derricks—Turnbuckle—
National Turnbuckle Derrick Co.

Diamonds for Core Drilling (See Carbon—Black Diamond)—

Die Heads—Bolt Threading—
Bignall & Keeler Mch. Works.
Landis Machine Co.

Die Heads—Stationary Pipe Threading—
Bignall & Keeler Mch. Works.
Cox & Sons Co., The.
Landis Machine Co.

Diesel Engines (See Engines)—

Dies—Pipe Threading—
Bignall & Keeler Mch. Works.
Cox & Sons Co., The.
Landis Machine Co.
Nye Tool & Machine Works.

Direct Driven Pumps (See Pumps)

Disc Bits (See Bits—Disc)—

Dissolved Acetylene (See Acetylene)—

Ditchers—Pipe Line—
Barber-Greene Co.
Buckeye Traction Ditcher Co.

Draw Works—
Lucey Mfg. Corp.
National Supply Co.
Titusville Iron Works Co.

Drillers Hose (See Hose)—

Drilling and Fishing Tools—
Acme Fishing Tool Co.
Baash-Ross Tool Co.
Bovaird & Seyfang Mfg. Co.
Bovaird Supply Co.
Bridgeport Machine Co.
Brown Tool Co., Inc.
Burns Tool Co.
Continental Supply Co.
Cushing, Tim, Tool & Supply Co.
Emsco Derrick & Equip. Co.
General Oil Tools Co.
Hinderliter Tool Co.
Hughes Tool Co.
International Supply Co.
Larkin & Co.
Leidecker Tool Co.
Lucey Mfg. Corp.
Murray Tool & Supply Co.
Oil Well Supply Co.
Reed Roller Bit Co.
Regan Forge & Engineering Co.
Spang & Co.
Star Drilling Machine Co.
U. S. Tool Co.

Drilling Engines (See Engines)—

Drilling Equipment—
Clark Brothers Co.
Hughes Tool Co.
O'Brien Steel Construction Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.
Reed Roller Bit Co.
Star Drilling Machine Co.

Drilling Machines—
Leidecker Tool Co.
Oil Well Supply Co.
Star Drilling Machine Co.

Drilling Tools (See Drilling and Fishing Tools)—

Drilling Valves (See Valves)—

Drills—Portable Air—
Chicago Pneumatic Tool Co.

Drive Shoes—
Bartlesville Supply Co.
Larkin & Co.

Drop-Forged Wrenches (See Wrenches)—

Drops and Seats—
Norris Brothers, Inc.

Dynamos—
Westinghouse Electric & Mfg. Co.

E

Ejectors—
Penberthy Injector Co.

Electrical Equipment—
Fairbanks-Morse & Co.
Pyle National Co.
Wico Electric Co.

Electrical Apparatus (See Apparatus—Electric)—

Electric Drilling Equipment—
Lucey Mfg. Corp.
Westinghouse Electric & Mfg. Co.

Electric Steel Castings (See Castings—Electric—Steel)—

Elevators—Casing and Tubing—
Bovaird Supply Co.
Bridgeport Machine Co.
Dunn Mfg. Co.
Lucey Mfg. Corp.
Oil Well Supply Co.
Wilson Oil Tools Corp.

Elevators—Rod—
B. & A. Specialty Co.
D. & B. Pump & Supply Co.
Dunn Mfg. Co.

Enamels—
Arco Company, The.
Detroit Graphite Co.
Sherwin-Williams Co.

Engineers—Consulting and Contracting—
Brooks Engineering Corp.
Hope Engineering & Supply Co.
Kellogg, M. W., Co.
McKee, Arthur G., & Co.
National Petroleum Engineering Corp.
Power Specialty Co.
Westcott & Greis.
Widdell Engineering Co.

Engineers—Fire Protection—
Brooks Engineering Corp.
Foamite-Childs Corp.

XUM

Engineers—Oil Buildings—
Austin Co.
International Derrick & Equipment Co.

Engineers—Oil Mining—
Ranney Oil Mining Co.

Engineers—Oil Treating—
Barnickel, Wm. S., & Co.
National Gas Products Co.

Engines—Crude Oil—
Continental Supply Co.
Western Machinery Co.

Engines—Diesel—
Bessemer Gas Engine Co.
Busch-Sulzer Bros. Diesel Engine Co.
Foos Gas Engine Co.
McIntosh & Seymour Corp.
Western Machinery Co.
Worthington Pump & Machinery Corp.

Engines—Drilling—
Ajax Iron Works
Beaver Manufacturing Co.
Bessemer Gas Engine Co.
Bovaird & Seyfang Mfg. Co.
Brownell Co., The
Buda Co.
Buffalo Gasolene Motor Co.
Clark Bros. Co.
Climax Engineering Co.
Franklin Valveless Engine Co.
Hercules Motor Corp.
Pattin Bros. Co.
Power Mfg. Co.
Republic Supply Co.
Titusville Iron Works Co.

Engines—Gas—
Beaver Manufacturing Co.
Bessemer Gas Engine Co.
Bruce-MacBeth Engine Co.
Buda Co.
Buffalo Gasolene Motor Co.
Chicago Pneumatic Tool Co.
Clark Brothers Co.
Climax Engineering Co.
Continental Supply Co.
Cooper, C. & G., Co.
Emsco Derrick & Equipment Co.
Foos Gas Engine Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hope Engineering & Supply Co.
Ingersoll-Rand Co.
International Supply Co.
Jones, S. M., Co.
Marion Mch. Fdy. & Supply Co.
Miller Improved Gas Engine Co.
National Supply Co.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Pattin Bros. Co.
Reid, Joseph, Gas Engine Co.
Titusville Iron Works Co.
Waukesha Motor Co.
Western Machinery Co.

Engines—Gasoline—
Beaver Manufacturing Co.
Buda Co.
Buffalo Gasolene Motor Co.
Continental Motors Corp.
Fairbanks-Morse & Co.
Hercules Motor Corp.
International Harvester Co. of America.
Waukesha Motor Co.
Western Machinery Co.

Engines—Oil—
Bessemer Gas Engine Co.
De La Vergne Machine Co.
Fairbanks-Morse & Co.
Frank Valveless Engine Co.
International Harvester Co. of America.
Ingersoll-Rand Co.
McIntosh & Seymour Corp.
National Supply Co.
Oil Well Supply Co.
Power Mfg. Co.
Reid, Joseph, Gas Engine Co.
Western Machinery Co.

Engines—Semi-Diesel, Oil—
Chicago Pneumatic Tool Co.

Engines—Steam—
Ajax Iron Works
Frick-Reid Supply Co.
Lucey Mfg. Corp.
National Supply Co.
Oil Well Supply Co.

Evaporators—
Newton Process Mfg. Co.
Ross Heater & Mfg. Co., Inc.

Extinguishers—Fire—
Foamite-Childs Corp.

F

Fabricators for Gasoline Plants and Refineries—
National Gas Products Co.
Stearns-Roger Mfg. Co.

Filters—Oil—
Burt Mfg. Co.

Fishing Tools (See Drilling and Fishing Tools)—

Fittings—Dropped Forged Steel—
Vogt, Henry, Machine Co.

Fittings—Forged Steel
Central Forging Co.

Fittings—Malleable & Cast Iron—
Bovaird Supply Co.
Crane Co.
Frick-Reid Supply Co.
Walworth Co.

Fittings—Pipe—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.
Gaso Pump & Burner Mfg. Co.
Jarecki Mfg. Co.
Kellogg, M. W., Co.
Kennedy Valve Mfg. Co.
Metric Metal Works.
Oil Well Supply Co.
Reading Steel Casting Co.
Republic Supply Co.
United Iron Works, Inc.
Victaulic Co. of America.
Walworth Co.

Fittings—Steel—
Dayton Pipe Coupling Co.
Kerotest Mfg. Co.
Ohio Steel Foundry Co.
Walworth Co.

Flanges—Brass, Iron and Steel—
Jefferson Union Co.
Metric Metal Works.
Walworth Co.

Flange Unions—
Gaso Pump & Burner Mfg. Co.
Wheatley Bros. Machine Works

Flashlights—
National Carbon Co.

Floating Roofs and Decks—
Chicago Bridge & Iron Works.

Floodlights—
Pyle-National Co.

Forging Billets—
Andrews Steel Co.
Harrisburg Pipe & Pipe Bending Co.
Heppenstall Forge & Knife Co.

Forgings—
Champion Machine & Forging Co.

Fuel Oil (See Oil—Fuel)—

Fuller's Earth—
Sinclair Refining Co.

G

Gas Holders—
Chicago Bridge & Iron Works.

Gaskets—
Garlock Packing Co.
McCord Radiator & Mfg. Co.

Gaskets—Fibre—
Durabla Mfg. Co.

Gas Masks & Safety Appliances—
Mine Safety Appliance Co.

Gasoline—
Crown Central Petroleum Co.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
Skelly Oil Co.

Gasoline—Natural—
Chestnut & Smith Corp.
National Gas Products Co.
Skelly Oil Co.
Warren Petroleum Co.

Gasoline Plant Equipment—
Bessemer Gas Engine Co.
Clark Brothers Co.
Kellogg, M. W., Co.
McKee, Arthur G., & Co.
National Gas Products Co.
Newton Process Mfg. Co.
Ross Heater & Mfg. Co., Inc.
Waddell Engineering Co.

Gas Regulator Casinghead—
Davis, G. M., Regulator Co.
National Gas Products Co.

Gas Scrubbers—
National Gas Products Co.
Newton Process Mfg. Co.

Gauge Glass—High Pressure—
Durabla Mfg. Co.

Gauge Poles—
Marsh Gauge Pole Co.

Gauges—Automatic Tank—
Brooks Engineering Co.

Gauges—Draft—
Brown Instrument Co.

Gauges—Oil—
Penberthy Injector Co.

Gauges—Pressure and Vacuum—
Bristol Co.
Brown Instrument Co.
Equitable Meter & Mfg. Co.
Metric Metal Works.

Gauges—Test—
Equitable Meter & Mfg. Co.
Metric Metal Works.

Gear Driven Pumps (See Pumps)

Gears—Cut—
Nuttall, R. D., & Co.

Gears—Reduction—
Emsco Derrick & Equipment Co.
Nuttall, R. D., & Co.

Gears—Reverse—
Emsco Derrick & Equipment Co.

Generators—
Westinghouse Electric & Mfg. Co.

Generators—Acetylene—
Oxweld Acetylene Co.

Generators—Turbine—
Moon Manufacturing Co.
Pyle-National Co.
Westinghouse Electric & Mfg. Co.

Glassware—Chemical for Laboratory Use—
Illinois Glass Co.

Governors—
Equitable Meter & Mfg. Co.
Gardner Governor Co.

Governors—Boiler Feed—
Chaplin-Fulton Mfg. Co.
Fisher Governor Co.

Grey Iron Castings (See Castings)

H

Hammers—Chipping and Caulking Pneumatic—
Chicago Pneumatic Tool Co.

Hammers—Riveting Pneumatic—
Chicago Pneumatic Tool Co.

Hangers—Iron and Steel—
Continental Supply Co.
Dodge Mfg. Corp.

Hangers—Tubing—
Hercules Tool Co.

Hatches—Gauges and Thief—
Oil Conservation Engineering Co.

Heat Exchangers—
Carbondale Machine Co.
Griscom-Russell Co.
Hope Engineering & Supply Co.
National Gas Products Co.
Newton Process Mfg. Co.
Ross Heater & Mfg. Co.
Southwestern Engineering Co., Inc.
Southwestern Engineering Corp.

Heat Exchangers—Fluid—
Braun, C. F., & Co.
Ross Heater & Mfg. Co., Inc.

Hoists—Pneumatic, Geared and Universal—
Chisholm-Moore Mfg. Co.
Yale & Towne Mfg. Co.

Hoists—Portable—
Chisholm-Moore Mfg. Co.
Ford Chain Block Co.
Sullivan Machinery Co.
Wright Mfg. Co.
Yale & Towne Mfg. Co.

Hooks for Rods and Tubing—
B. & A. Specialty Co.
Dunn Mfg. Co.

Hose—
Fenwick-Reddaway Mfg. Co.

Hose—Drillers—
Goodrich, B. F., Rubber Co.
United States Rubber Co.

Hose—Oil Suction and Discharge
Goodrich, B. F., Rubber Co.
United States Rubber Co.

Hose—Rubber—
Goodyear Tire & Rubber Co.
United States Rubber Co.

Hypochlorite of Lime—
Mathieson Alkali Works, Inc.

I

Injectors—
Penberthy Injector Co.

Inspectors—Pipe—
Hunt, Robert W., Co.

Insulation Materials—
Celite Products Co.
General Insulating & Mfg. Co.
Johns-Manville, Inc.

Insurance—Fire—
Oil Insurance Association

Insurance—Tornado—
Oil Insurance Association.

Iron—Ingot—
American Rolling Mill Co.

J

Jacks—Hydraulic—
Bridgeport Machine Co.

Jacks—Lifting—
Templeton, Kenly & Co., Ltd.

Jacks—Pumping—
American Mfg. Co. of Texas.
American Wells Works.
Bessemer Gas Engine Co.
Braden Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
Kansas City Hay Press Co.
Norris, W. C.
Spang & Co.

Jars—
Arbon, Paul, & Co.
Bridgeport Machine Co.
Spang & Co.

Jar Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

K

Kerosene—
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.

L

Lacquers—
Arco Company, The
Sherwin-Williams Co.

Lanterns—Electric—
Delta Electric Co.

Lead and Mixed Metal Products—
Eagle-Picher Lead Co.

Lead in Oil—
Eagle-Picher Lead Co.
National Lead Co.

Lead Wool and Containers—
Eagle-Picher Lead Co.

Lighting Equipment—
Pyle National Co.
Westinghouse Electric & Mfg. Co.

Litharge—
Eagle-Picher Lead Co.
National Lead Co.

Loaders—Trucks—
Barber-Greene Co.

Long Distance Telephone—
American Telephone & Telegraph Co.

Lubricating Devices—
McCord Radiator & Mfg. Co.

Lubricators—
Ajax Iron Works.
Lunkenheimer Co.

Lubricators—Force Feed—
Hills-McCanna Co.
Manzel Brothers Co.
McCord Radiator & Mfg. Co.

M

Machine Tools—
Ryerson, Jos. T., & Sons, Inc.

Manholes—Tank—
Brooks Engineering Corp.

Manifolds—
Reid, Joseph, Gas Engine Co.

Meters—Gas—
Equitable Meter & Mfg. Co.
Foxboro Co., Inc.
Metric Metal Works.
Pittsburgh Meter Co.
Roots, P. H. & F. M., Co.
Westcott & Greis.

Meters—Electric—
Brown Instrument Co.

Meters—Gasoline—
Pittsburgh Meter Co.

Meters—Oil—
Pittsburgh Meter Co.

Molded Goods—Rubber—
Goodyear Tire & Rubber Co.

Motors—Electric—
Fairbanks-Morse & Co.
Westinghouse Electric & Mfg. Co.

Motors—Gasoline (See Engines—Gasoline)—

N

Naphtha—
Pure Oil Co.

Natural Gasoline (See Gasoline—Natural)—

Natural Gasoline Plant Equipment
Campbell, J. A.
Cooper, C. & G. Co.
Griscom-Russell Co.
National Gas Products Co.
Roots, P. H. & F. M., Co.
Ross Heater & Mfg. Co., Inc.
Smith Separator Co.
Westcott & Greis.

Nitrogen—
Linde Air Products Co.

Nozzles—Spray—
Power Plant Equip. Co.

O

Oil and Gas Pipe Line Construction—
Hope Engineering & Supply Co.

Oil Burners (See Burners—Oil)—

Oil Field Equipment—
Baker Casing Shoe Co.
Bridgeport Machine Co.
Gaso Pump & Burner Mfg. Co.
International Derrick & Equipment Co.
Iron King Mfg. Co.
Kaw Steel Construction Co.
National Supply Co.
Oil Well Supply Co.
Parkersburg Machine Co.
Parkersburg Rig & Reel Co.
Reed Roller Bit Co.
Regan Forge & Engineering Co.
Reid, Joseph, Gas Engine Co.
Republic Supply Co.
Simplex Equipment Co.
Trumble Gas Trap Co.

Oil—Fuel—
Crown Central Petroleum Corp.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
Texas Company, The

Oil—Gas—
Crown Central Petroleum Corp.
Gulf Refining Co.
Pure Oil Co.
Sinclair Refining Co.
Texas Company, The

Oil—Lubricating—
Barnsdall Refining Co.
Crown Central Petroleum Corp.
Empire Refineries, Inc.
Gulf Refining Co.
Humble Oil & Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
Skelly Oil Co.
Texas Company, The

Oil—Tractor—
Barnsdall Refining Co.
Gulf Refining Co.
Pure Oil Co.
Skelly Oil Co.

Oiling Devices—
Lunkenheimer Co.

Oil Meters (See Meters)—

Oil Piping Equipment (See Fittings)—

Oil Reclaiming Process—
Barnickel, Wm. S., & Co.
Houston Pump & Supply Co.

Oil Well Cementing—
Halliburton Oil Well Cementing Co.

Oil Well Tools—
D & B Pump & Supply Co.
Hinderliter Tool Co.
Reed Roller Bit Co.
Titusville Forge Co.
U. S. Tool Co.

Over Shots—
Reed Roller Bit Co.
Regan Forge & Engineering Co.

Oxygen—
Linde Air Products Co.

P

Packer Release—
Acme Fishing Tool Co.

Packers—
Goodyear Tire & Rubber Co.
Guiberson Corp.
Larkin & Co.
Layne & Bowler Co.
Meier, E. C., Lubricating Co.
Oil Well Supply Co.
Regan Forge & Engineering Co.
Spang & Co.
United States Rubber Co.

Packing—
Crane Packing Co.
Durabla Mfg. Co.
Garlock Packing Co.
Goodrich, B. F., Rubber Co.
Imperial Belting Co.
Johns-Manville, Inc.

Packing—Metallic—
Crane Packing Co.

Paint Guns—
Binks Spray Equipment Co.

Painting Equipment—Mechanical
Brown Instrument Co.
Matthews, W. N., Corp.

Paints—
Aluminum Co. of Ameica
American Asphalt Paint Co.
Arco Company, The
Cook Paint & Varnish Co.
Detroit Graphite Co.
Dixon, Joseph, Crucible Co.
Du Pont de Nemours, E. I. & Co., Inc.
Eagle-Picher Lead Co.
Eclipse Paint & Mfg. Co.
Hill, Hubbell & Co.
National Lead Co.
Sherwin-Williams Co.
St. Louis Surfacer & Paint Co.

Pipe—Cast Iron—
Greenspon's Jos., Sons Iron & Steel Co.
International Supply Co.
U. S. Cast Iron Pipe & Fdy. Co.

Pipe—Lead Chemical and Anti-Monial—
Eagle-Picher Lead Co.

Pipe—Steel—
Central Tube Co.
Continental Supply Co.
Greenspon's Jos., Sons Iron & Steel Co.
Jarecki Mfg. Co.
Kellogg, M. W., Co.
Murray Tool & Supply Co.
National Supply Co.
National Tube Co.
Republic Iron & Steel Co.
Ryerson, Jos. T., & Sons, Inc.
South Chester Tube Co.
Spang Chalfant & Co., Inc.
Superior Tube Co.
Wheeler Steel Corp.

Pipe—Wrought Iron—
Byers, A. M., Co.
Frick-Reid Supply Co.
Greenspon's, Jos., Sons Iron & Steel Co.
Oil Well Supply Co.
Reading Iron Co.
South Chester Tube Co.
Superior Tube Co.

Pipe and Nipple Threading Machines—
Bignall & Keeler Machine Works.
Cox & Sons Co., The
Landis Machine Co.
Ryerson, Jos. T., & Sons, Inc.

Pipe Clamps (See Clamps—Pipe)

Pipe Grips—
Larkin & Co.

Pipe Headers—
National Tube Co.
Newton Process Mfg. Co.

Pipe Line Coatings—
Hill, Hubbell & Co.

Pipe Line Construction Tools—
National Transit Pump & Machine Co.

Pipe Line Equipment—
Wheatley Bros. Machine Works
Gaso Pump & Burner Mfg. Co.

Pipe Screwing Machines—
Buckeye Traction Ditcher Co.

Pipe Straightening Machines—
W-K-M Co., Inc.

Pipe Suspension Device—
Stearns-Roger Mfg. Co.

Pipe Threaders—Power—
Williams Tool Corp.

Pipe Tools—
Armstrong Brothers Tool Co.
Nye Tool & Machine Works
Walworth Co.

Piping—Fabricated—
Midwest Piping & Supply Co.

Piping—Hard Rubber—
United States Rubber Co.

Piping—Steel & Iron—
Crane Co.
Greenspon's, Jos., Sons Iron & Steel Co.
Power Piping Co.

Pistons—
Guiberson Corp.
Heppenstall Forge & Knife Co.

Pistons—Expansion—
Wilson Oil Tools Corp.

Pistons—Slush Pump—
Guiberson Corp.

Plugs—Bottom Water—
Guiberson Corp.

Pre-Heaters—
National Gas Products Co.
Newton Process Mfg. Co.
Ross Heater & Mfg. Co., Inc.

Preservatives—Asphalt—
American Asphalt Paint Co.

Pulleys—Wood, Iron and Steel—
Continental Supply Co.
Dodge Mfg. Co.

Pulling Machines—
Iron King Mfg. Co.
National Supply Co.
Safety Pulling Machine Co.

Pumpers—Long Stroke—
Farley Machine Co.

Pumping and Pulling Motors—Electric—
Westinghouse Electric & Mfg. Co.

Pumping Equipment—
American Well Works.
Axelson Machine Co.
Bryson Jackson Pump Mfg. Co. Inc.
D & B Pump & Supply Co.
Farley Machine Co.
Goulds Pumps, Inc.
Jones, S. M., Co.
Myers, F. E., & Bros. Co.
Northrup Equipment Co.
Oil Well Supply Co.
Prescott Co.
Ratigan, J. P., Co.
Waukesha Motor Co.

Pumping Gear Units—
Nuttall, R. D., & Co.

Pumping Powers—
Bessemer Gas Engine Co.
Buda Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
Kansas City Hay Press Co.
Marion Mch., Fdy. & Supply Co.
National Supply Co.
Oil Well Supply Co.
Pattin Bros. Co.
Reid, Joseph, Gas Engine Co.
Spence Machine Co.
Titusville Iron Works Co.

Pumps—Boiler Feed—
Ajax Iron Works.
Byron Jackson Pump Mfg. Co., Inc.
Fairbanks-Morse & Co.
Gardner Governor Co.
Goulds Pumps, Inc.
Oil Well Supply Co.
Smith Separator Co.

Pumps—Centrifugal—
American Well Works.
Byron Jackson Pump Mfg. Co., Inc.
Fairbanks-Morse & Co.
Goulds Pumps, Inc.
Smith Separator Co.
Worthington Pump & Machinery Corp.

Pumps—Direct Driven—
Bessemer Gas Engine Co.
Smith Separator Co.

Pumps—Electric—
Prescott Co.
Smith Separator Co.

Pumps—Fuel Oil Service—
Blackmer Pump Co.
Goulds Pumps, Inc.
Northern Fire Apparatus Co.
Smith Separator Co.

Pumps—Fuel Oil Transfer—
Blackmer Pump Co.
Byron Jackson Pump Mfg. Co., Inc.

Pumps—Gasoline and Oil for Filling Stations—
Gilbert & Barker Mfg. Co.

Pumps—Gear Driven—
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
Prescott Co.
Smith Separator Co.

Pumps—Hot Oil—
Blackmer Pump Co.
Byron Jackson Pump Mfg. Co., Inc.
Goulds Pumps, Inc.
Smith Separator Co.

Pumps—Pipe Line—
Byron Jackson Pump Mfg. Co., Inc.
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
National Transit Pump & Machine Co.
Prescott Co.
Wheatley Bros. Machine Works
Worthington Pump & Machinery Corp.

Pumps—Portable—
Gaso Pump & Burner Mfg. Co.

Pumps—Power—
Fairbanks-Morse & Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
Myers, F. E., Bro. & Co.
National Transit Pump & Machine Co.
Prescott Co.
Smith Separator Co.
Waukesha Motor Co.

Pumps—Refinery—
Blackmer Pump Co.
Byron Jackson Pump Mfg. Co., Inc.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
National Transit Pump & Machine Co.
Northern Fire Apparatus Co.
Smith Separator Co.

Pumps—Rotary—
Blackmer Pump Co.
Goulds Pumps, Inc.
Northern Fire Apparatus Co.
Roots, P. H. & F. M., Co.

Pumps—Sand—
Bridgeport Machine Co.
Larkin & Co.
Smith Separator Co.

Pumps—Slush—
Gardner Governor Co.

Pumps—Steam—
Fairbanks-Morse Co.
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Prescott Co.
Smith Separator Co.

Pumps—Suction—
Gaso Pump & Burner Mfg. Co.

Pumps—Vacuum—
Bessemer Gas Engine Co.
Chicago Pneumatic Tool Co.
Clark Brothers Co.
Gaso Pump & Burner Mfg. Co.
Miller Improved Gas Engine Co.
Roots, P. H. & F. M., Co.
Ross Heater & Mfg. Co., Inc.
Smith Separator Co.

Pumps—Water—
American Well Works.
Byron Jackson Pump Mfg. Co., Inc.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
Northern Fire Apparatus Co.
Prescott Co.
Smith Separator Co.

Purifiers—Oil Absorption—
Sharples Specialty Co.

Pyrometers—
Brown Instrument Co.
Republic Flow Meters Co.

R

Ratchet Pipe Cutters—
Toledo Pipe Threading Machine Co.

Ratchet Pipe Threaders—
Nye Tool & Machine Works
Toledo Pipe Threading Machine Co.

Receiving Boxes—
Reid, Joseph, Gas Engine Co.

Recorders—Differential Pressure—
Equitable Meter & Mfg. Co.
Metric Valve Works.

Refinery Equipment—
American Radiator Co.
Blaw-Knox Co.
Braun, C. F., & Co.
Carbondale Machine Co.
Chicago Bridge & Iron Works.
Cross Engineering Co.
Graver Corp.
Griscom-Russell Co.
Kellogg, M. W. Co.
McKee, Arthur G., & Co.
Newton Process Mfg. Co.
Petroleum Appliance Co.
Petroleum Iron Works Co.
Power Piping Co.
Power Specialty Co.
Reid, Joseph, Gas Engine Co.
Ross Heater & Mfg. Co., Inc.
Ross-Meehan Foundries.
Smith, A. O., Corp.
Smith Separator Co.
Southwestern Engineering Co., Inc.
Southwestern Engineering Corp.
United Iron Works, Inc.
Universal Oil Products Co.
Vogt, Henry, Machine Co.
Walsh & Weidner Boiler Co.
Westcott & Greis.
Widdell Engineering Co.

Refractories—Furnace, Stills and Baffles—
Bottfield Refractories Co.
National Gas Products Co.

Refrigerating Machinery—
Carbondale Machine Co.
United Iron Works, Inc.
Vogt, Henry, Machine Co.

Regulators—
Fisher Governor Co.
Gilfillan Machine Works.
Smith Separator Co.

Regulators—Gas—
Chaplin-Fulton Mfg. Co.
Davis, G. M., Regulator Co.
Equitable Meter & Mfg. Co.
Fisher Governor Co.
Metric Metal Works.
National Gas Products Co.
Smith Separator Co.

Rental Service—
Bridgeport Machine Co.

Reversible Clutches—
Bessemer Gas Engine Co.

Rig Irons—
International Supply Co.
Lucey Mfg. Corp.
National Supply Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.

Rigs—Drilling, All Steel—
International Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Rigs—Portable Drilling—
National Supply Co.
National Turnbuckle Derrick Co.
Star Drilling Machine Co.

Rod Guides—
Meier, E. C., Lubricating Co.

Rods—Polish—
Jones, S. M., Co.

Rods—Pull—
Axelson Machine Co.
Columbus Sucker Rod Co.
Jones, S. M., Co.
Sheffield Steel Corp.

Rods—Sucker—
Axelson Machine Co.
Columbus Sucker Rod Co.
D & B Pump & Supply Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
National Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Sheffield Steel Corp.

Rods—Valve—
Jones, S. M., Co.

Roofing—Asbestos—
Johns-Manville, Inc.

Roofing—Galvanized Iron—
American Rolling Mill Co.

Rope Socket Metal—
Eagle-Picher Lead Co.

Rope—Manila—
Ajax Rope Co., Inc.
Bovaird Supply Co.
Republic Supply Co.

Rope—Wire—
Ajax Rope Co., Inc.
American Cable Co.
Bovaird Supply Co.
Bridgeport Machine Co.
Broderick & Bascom Rope Co.
International Supply Co.
Jarecki Mfg. Co.
Wickwire-Spencer Steel Corp.
Leschen, A. & Sons, Rope Co.
Williamsport Wire Rope Co.

Rotary Bit Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

Rotary Drilling Equipment—
Emsco Derrick & Equipment Co.
Frick-Reid Supply Co.
International Derrick & Equipment Co.
Link-Belt Co.
Lucey Mfg. Co.
National Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Titusville Iron Works Co.

Rotary Lines (See Rope—Wire)—

Rotary Post—
Reed Roller Bit Co.

Rotary Tool Joints—
Bartlesville Supply Co.
Hughes Tool Co.

Rust Preventatives—
Dearborn Chemical Co.
Eagle-Picher Lead Co.

S

Sand Lines—Manila—
Ajax Rope Co., Inc.
Plymouth Cordage Co.

Sand Lines—Wire—
Ajax Rope Co., Inc.
Broderick & Bascom Rope Co.
Hazard Mfg. Co.
Wickwire-Spencer Steel Corp.

Screens—Oil Well—
Layne & Bowler Co.

Screens—Water Well—
Layne & Bowler Co.

Screws Temper—
Burns Tool Co.

Separators—Centrifugal—
Miller, Max B., & Co.
Sharples Specialty Co.

Separators—Gas and Oil—
Smith Separator Co.

Separators—Steam—
Volz Engineering Equipment Co.

Sheet Lead—Chemical and Antimonial—
Eagle-Picher Lead Co.

Sheets—Corrugated, Black and Galvanized—
American Rolling Mill Co.
American Sheet & Tin Plate Co.
Ryerson, Jos. T., & Son, Inc.
United Alloy Steel Corp.

Sheets—Steel—
American Rolling Mill Co.
American Sheet & Tin Plate Co.
Sheffield Steel Corp.
United Alloy Steel Corp.

Shingles—Asbestos—
Johns-Manville, Inc.

Siding—Galvanized Iron—
American Rolling Mill Co.

Sleeves—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.

Sleeves—Split—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.

Smoke Stacks—
Donovan Boiler Works.

Snuffers—Fire—
Simplex Equipment Co.

Sockets—
Acme Fishing Tool Co.
Bridgeport Machine Co.
Spang & Co.

Sockets—Sucker Rod—
Guiberson Corp.

Sockets—Swivel—
Arbon, Paul, & Co.

Sockets—Wire Rope—
Chicago Steel Foundry Co.

Soda Ash—
Mathieson Alkali Works, Inc.

Soda—Caustic—
Mathieson Alkali Works, Inc.

Solders—Bar and Wire—
Eagle-Picher Lead Co.
Hoyt Metal Co.

Spark Plugs—
Mosler Metal Products Corp.

Spears—
Acme Fishing Tool Co.
Brown Tool Co., Inc.

Sprockets—Power Transmission—
Ajax Iron Works
Chain Belt Co.

Stands—Vice—
Nye Tool & Machine Works

Steel—All Kinds—
Ryerson, Jos. T., & Son, Inc.

Steel—Alloy—
Central Steel Co.
Timken Roller Bearing Co.
United Alloy Steel Corp.

Steel—Bit—
Central Steel Co.
United Alloy Steel Corp.

Steel—Hot Rolled Strip—
Central Steel Co.

Steel—Special—
Andrews Steel Co.
Central Steel Co.
United Alloy Steel Corp.

Steel Fabricators—Structural—
Austin Co.
Braden Co.
Graver Corp.
International Derrick & Equipment Co.

Steel Pitmans—
International Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Steel Plate Construction—
Chicago Bridge & Iron Works.
Graver Corp.
Kaw Steel Construction Co.
Petroleum Iron Works Co.
Vogt, Henry, Machine Co.

Steel Wheels and Tug Rims—
International Derrick & Equipment Co.

Stills—
Blaw-Knox Co.
Chicago Bridge & Iron Works
Graver Corp.
Kaw Steel Construction Co.
Kellogg, M. W., Co.
McKee, Arthur G., & Co.
Newton Process Mfg. Co.
Petroleum Iron Works Co.
Smith, A. O., Corp.
Vogt, Henry, Machine Co.
Widdell Engineering Co.

Stocks and Dies—
Borden Co.
Nye Tool & Machine Works.
Toledo Pipe Threading Machine Co.

Stuffing Boxes—
Axelson Machine Co.
Kansas City Hay Press Co.

Sulphuric Acid—
Eagle-Picher Lead Co.

Superheaters—Steam—
Power Plant Equipment Co.

Swabs—
Arbon, Paul, & Co.
Burt Corporation.
Guiberson Corp.
Simplex Equipment Co.

Swedge Nipples—
Dresser, S. R., Mfg. Co.
Harrisburg Pipe & Pipe Bending Co.

Swing Line Equipment—
Brooks Engineering Corp.

Swivels—
Layne & Bowler Co.
Lucey Mfg. Corp.
Titusville Iron Works Co.

T

Tachometers—
Brown Instrument Co.

Tank Equipment—
Brooks Engineering Corp.
Oil Conservation Engineering Co.

Tanks—Bolted—
Butler Mfg. Co.
Columbian Steel Tank Co.
Maloney Tank Mfg. Co.
Parkersburg Rig & Reel Co.

Tanks—Bulk Station—
Butler Mfg. Co.
Graver Corp.

Tanks—Cylindrical—
Graver Corp.
Petroleum Iron Works Co.

Tanks—Elevated Steel—
Chicago Bridge & Iron Works
Graver Corp.

Tanks—Field Storage—
American Car & Foundry Co.
Donovan Boiler Works.
Graver Corp.
Kaw Steel Construction Co.
Kewanee Boiler Co.
Maloney Tank Mfg. Co.
Petroleum Iron Works Co.
Pittsburgh-Des Moines Steel Co.
Riter-Conley Co.
United Iron Works, Inc.

Tanks—Horizontal Storage—
Graver Corp.
Kaw Steel Construction Co.
Maloney Tank Mfg. Co.

Tanks—Run Down—
Donovan Boiler Works.
Graver Corp.
Kaw Steel Construction Co.
Newton Process Mfg. Co.

Tanks—Trucks—
Butler Mfg. Co.
Columbian Steel Tank Co.
White Co.

Tanks—Underground—
Butler Mfg. Co.
Gilbert & Barker Mfg. Co.
Graver Corp.
Kewanee Boiler Co.
Pittsburgh-Des Moines Steel Co.

Tanks—Welded—
Chicago Bridge & Iron Works.
Graver Corp.

Taper Taps—
Hughes Tool Co.

Tapes—Measuring for Oil Gauging—
Lufkin Rule Co.
States Engineering Co.

Thermometers—Indicating and Recording—
American Schaeffer & Budenberg Corp.
Bristol Co.
Brown Instrument Co.

Thermometers—Resistance—
Brown Instrument Co.

Threading Machines—
Bignall & Keeler Machine Wks.
Cox & Sons Co., The
Landis Machine Co.

Thread Protectors—
Spang & Co.

Tires—Automobile—
Continental Supply Co.

Tires—Pneumatic & Solid—
Kelly-Springfield Tire Co.

Tires—Truck—
Kelly-Springfield Tire Co.

Tongs—
Bridgeport Machine Co.
Wilson Oil Tools Corp.

Tongs—Back Up—
Williams, J. H., & Co.

Tongs—Break Out—
Reed Roller Bit Co.
Williams, J. H., & Co.

Tongs—Casing —
Dunn Mfg. Co.
Guiberson Corp.

Tongs—Chain Pipe—
Armstrong Bros. Tool Co.
Williams, J. H., & Co.

Tongs—Pipe—
National Transit Pump & Machine Co.

Tongs—Rotary—
Dunn Mfg. Co.

Tongs—Tool Joint—
Guiberson Corp.
Hughes Tool Co.
Reed Roller Bit Co.

Tongs—Tubing—
Dunn Mfg. Co.

Tool Chests—Pipe—
Nye Tool & Machine Works.

Tool Joints—
Bridgeport Machine Co.
Federal Supply Co.
Hughes Tool Co.
Lucey Mfg. Corp.
Oil Well Supply Co.
Regan Forge & Engineering Co.

Torches—
Oxweld Acetylene Co.

Towers—
Graver Corp.

Tractors—
Cleveland Tractor Co.
International Harvester Co. of America.

Trailers—
Spencer Trailer Co.

Transmission Belt—Rubber—
Goodrich, B. F., Rubber Co.
United States Rubber Co.

Transmission Lining—
Stanley Belting Corp.

Traveling Block—
Lucey Mfg. Corp.
Regan Forge & Engineering Co.
Wright Mfg. Co.

Trenchers—Vertical Boom—
Barber-Greene Co.

Trucks—Motor—
Ford Motor Co.
General Motors Truck Co.
Graham Brothers.
International Harvester Co. of America.
White Co.

Tubes—Boiler, Charcoal Iron—
Byers, A. M., Co.
Reading Iron Co.

Tubes—Boiler Steel—
Continental Supply Co.
National Tube Co.
Ryerson, Jos. T., & Sons, Inc.

Tubing—
Babcock & Wilcox Tube Co.
Byers, A. M., Co.
Central Tube Co.
Continental Supply Co.
National Tube Co.
Reading Iron Co.
Republic Iron & Steel Co.
South Chester Tube Co.
Spang, Chalfant & Co., Inc.
Superior Tube Co.
Wheeling Steel Corp.

Tubing Catchers—
Continental Supply Co.
Dunn Mfg. Co.
Guiberson Corp.

Tubing Protectors (See Rod Guides)—

Tubular Goods—
Babcock & Wilcox Tube Co.
Central Tube Co.
Continental Supply Co
Oil Well Supply Co
Republic Iron & Steel Co.
Spang, Chalfant & Co., Inc.
Wheeling Steel Corp.

Tubular Goods—Wrought Iron—
Byers, A. M., Co.
Reading Iron Co.

Turbines for Lighting Equipment
Lucey Mfg. Corp.
Westinghouse Electric & Mfg. Co.

U

Underreamer Body Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

Underreamers—
Bridgeport Machine Co.
Brown Tool Co., Inc.
Guiberson Corp.
Wilson Oil Tools Corp.

Unions—
Central Forging Co.
Jefferson Union Co.

V

Valuations—
American Appraisal Co.

Valves—Blow-Off—
Homestead Valve Mfg. Co.
Merco Nordstrom Valve Co.

Valves—Brass & Bronze—
Homestead Valve Mfg. Co.
Lunkenheimer Co.
Reading Steel Casting Co.
Walworth Co.

Valves—Cast Steel—
Chapman Valve Mfg. Co.
Homestead Valve Mfg. Co.
Walworth Co.

Valves—Check—
Gaso Pump & Burner Mfg. Co.
Lunkenheimer Co.
Walworth Co.

Valves—Drop Forged Steel—
Edwards Valve & Mfg. Co.
Vogt, Henry, Machine Co.

Valves—Gate—High and Low Pressure—
Chapman Valve Mfg. Co.
Crane Co.
Darling Valve & Mfg. Co.
Kennedy Valve Mfg. Co.
Kerotest Mfg. Co.
Ludlow Valve Mfg. Co.
Lunkenheimer Co.
Murray Tool & Supply Co
Powell, Wm., Co.
Walworth Co.

Valves—Iron—
Chapman Valve Mfg. Co.
Lunkenheimer Co.
Merco Nordstrom Valve Co.
Reading Steel Casting Co.
Walworth Co.

Valves—Metal Pump—
Durabla Mfg. Co.

Valves—Pump—
United States Rubber Co.

Valves—Relief—Supersensitive—
Davis, G. M., Regulator Co.

Valves—Steel—
Chapman Valve Mfg. Co.
Edward Valve Mfg. Co.
Kerotest Mfg. Co.
Lunkenheimer Co.
Metric Metal Works.
Powell, Wm., Co.
Reading Steel Casting Co.
Walworth Co.

Valves—Tank Vent—
Brooks Engineering Corp.
Oil Conservation Engineering Co.

Valves—Working Barrel—
Atlas Ball Co.
Axelson Machine Co.
D & B Pump & Supply Co.
Hough, Charles N., Mfg. Co.
Northrup Equipment Co.
Oil Well Supply Co.

Varnishes—
Arco Company, The
Detroit Graphite Co.
Sherwin-Williams Co.

Vises—Bench—
Nye Tool & Machine Works.

Vises—Pipe—
Nye Tool & Machine Works.

Vises—Post—
Nye Tool & Machine Works.

W

Wagons—Truss Wheel—
Athey Truss Wheel Co.

Walking Beams—Steel—
Emsco Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Water Cooling Systems —
Power Plant Equipment Co.

Water Softeners and Filters—
Butler Mfg. Co.
Graver Corp.

Wax—
Barnsdall Refining Co.
Gulf Refining Co.
Pure Oil Co.

Weight Indicators—
Hughes Tool Co.

Welding Accessories—Electric—
Wilson Welder & Metals Co.

Welding and Cutting Apparatus—
Oxweld Acetylene Co.

Welding Machines—Electric—
Wilson Welder & Metals Co.

Welding Supplies—
Oxweld Acetylene Co.

Welding Wire—
Frick-Reid Supply Co.
Oxweld Acetylene Co.
Wilson Welder & Metals Co.

Well Shooting—
Eastern Torpedo Co.
Zero Hour Torpedo Co.

Wheels—Pipe Cutter—
Nye Tool & Machine Works.

Winches—
Braden Co.
Brooks Engineering Co.
Oil Conservation Engineering Co.

Wire Lines (See Cables—Steel)—

Wood Patterns and Models—
Gaso Pump & Burner Mfg. Co.

Working Barrels—
Axelson Machine Co.
D & B Pump & Supply Co.
D. & N. Specialty Co.
Franklin Wisconsin Engine Co.
Frick-Reid Supply Co.
Hough, Charles N., Mfg. Co.
McGregor Working Barrel Co.
Norris, W. C.
Northrup Equipment Co.
Oil Well Supply Co.

Wrenches—Closet Spuds—
Nye Tool & Machine Works.

Wrenches—Drop Forged—
Williams, J. H., & Co.

Wrenches—Pipe—
Trimont Mfg. Co.
Walworth Co.

Wrenches—Ratchet—
Dresser, S. R., Mfg. Co.
Nye Tool & Machine Works.

Z

Zinc Oxide—
Eagle-Picher Lead Co.

XUM

Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS

Pipe Line Statement for May

Runs

	Month	Daily Av.
*Prairie Pipe Line Co.	3,875,000	125,000
Gulf Pipe Line Co.	1,068,009	34,451
Texas Pipe Line Co.	473,755	15,282
Magnolia Petroleum Co.	1,199,767	38,702
Empire Pipe Line Co.	828,872	26,738
Cosden Pipe Line Co.	913,699	29,484
Sinclair Pipe Line Co.	1,755,344	56,624
*Other lines	7,750,000	250,000
Total May	17,864,437	576,281
Total April	17,796,296	593,210
Difference	68,141	16,929

Shipments

†Prairie Pipe Line Co.	4,542,260	146,525
Gulf Pipe Line Co.	1,113,474	35,918
Texas Pipe Line Co.	773,802	24,961
Magnolia Petroleum Co.	1,476,204	47,619
Empire Pipe Line Co.	790,792	25,509
Cosden Pipe Line Co.	913,280	29,461
†Sinclair Pipe Line	2,830,468	91,305
*Other lines	8,835,000	285,000
Total May	21,275,280	686,298
Total April	20,718,297	690,608
Difference	456,983	4,310

Stocks

*Prairie Oil & Gas Co.	27,250,000
*Prairie Pipe Line Co.	2,000,000
Gulf Pipe Line and Gypsy Oil Co.	6,300,446
The Texas Company	3,301,196
Magnolia Petroleum Co.	4,593,255
Empire Pipe Line Co.	2,840,238
Cosden Pipe Line Co.	1,956,281
*Sinclair Crude Oil Purchasing Co.	19,400,000
Carter Oil Co.	13,382,355
*Other lines	9,600,000
Total May	90,623,771
Total April	92,616,769
Difference	1,992,898

*Estimated. †Prairie shipments include Texas crude oil. Sinclair shipments include Texas and Wyoming crude oil.

Note: Stocks do not include 5,500,000 bbls. of crude oil held in storage on private tank farms and leases.

EASTERN PIPE LINES

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for April and May:

	April, 1926	May, 1926
Nat. Transit	175,931.37	174,995.11
S. W. Pa. Pipe	89,773.16	91,188.06
Eureka P. L.	372,871.02	370,755.39
Buckeye P. L. (Macksburg)	304,514.55	294,855.09
Buckeye P. L. (Cleveland)	12,060.87	11,845.40
Buckeye P. L. (Lima, etc.)	127,204.85	133,401.39
Indiana P. L.	9,095.76	10,520.15
Cumberland P. L.	273,842.36	268,123.06
N. Y. Transit	20,181.07	19,552.93
Tidewater P. L.	160,027.79	159,613.39
Pure Oil	171,766.80	172,006.54
Emery P. L.	48,703.74	49,842.97
Indian Ref.	93,143.14	97,979.63
Paragon Dev.	24,723.50	23,308.37
Pittsburgh P. L.	6,733.43	.....
Total	1,890,573.41	1,877,987.48
Daily average	63,019.11	60,580.24

Note: Indian Refining Co. also reported other receipts of 283,329.87 bbls. Paragon Refining Co. had other receipts of 140,751.80 bbls. Paragon Development had other receipts of 2,113.44 bbls. Pure Oil had other receipts of 59,553.74 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for April and May:

	April, 1926	May, 1926
Nat. Transit	314,763.21	345,085.14
S. W. Pa. P. L.	409,564.75	393,148.52
Eureka P. L.	163,392.74	192,968.02
Buckeye P. L. (Macksburg)	94,264.91	114,603.45
Buckeye P. L. (Cleveland)	1,162.42	969.91
Buckeye P. L. (Lima, etc.)	823,641.06	910,244.94
Indiana P. L.	963,616.70	996,006.17
Cumberland P. L.	162,112.44	144,932.35
N. Y. Transit	668,467.25	690,213.42
Northern Pipe	133,960.98	161,237.60
Tidewater P. L.	93,030.34	159,830.90
Pure Oil	205,777.75	244,274.44
Emery P. L.	45,829.05	49,935.36
Paragon Ref.	170,282.16	140,751.80
Indian Ref.	388,296.97	419,340.15
Paragon Dev.	26,494.22	27,092.55
Pittsburgh P. L.	6,539.32	.....
Total	4,571,126.27	4,990,634.73
Daily average	152,370.87	154,536.60

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky, at the close of April and May, were as follows:

	April, 1926	May, 1926
Nat. Transit	1,069,233.29	1,062,711.06
S. W. Pa. P. L.	588,704.11	592,119.25
Eureka P. L.	1,621,601.25	1,489,308.65
Buckeye P. L. (Macksburg)	417,370.13	464,767.17
Buckeye P. L. (Cleveland)	73,536.91	80,869.73
Buckeye P. L. (Lima, etc.)	2,369,543.33	2,331,309.46
Indiana P. L.	544,568.51	566,868.09
Cumberland P. L.	599,474.86	598,818.89
Southern P. L.	481,210.52	447,896.85
N. Y. Transit	695,608.61	735,622.34
Northern P. L.	436,138.52	442,189.21
Pure Oil	460,634.48	450,527.08
Emery P. L.	34,514.24	35,299.99
Paragon Ref.	72,985.28	45,985.57
Indian Ref.	231,194.41	193,356.41
Paragon Dev.	4,918.23	4,107.66
Pittsburgh P. L.	4,614.59	.....
Total	9,805,851.27	9,531,757.40
Decrease	*367,558.84	274,093.87

*Increase.

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of April and May showing the gross stocks of the above fields:

	April, 1926	May, 1926
Pennsylvania	4,076,568.47	3,824,110.70
Lima	947,707.33	953,292.28
Kentucky	1,163,245.60	1,167,315.61
Mid-Continent	3,459,618.16	3,479,821.87
Illinois	158,711.71	107,216.94
Total	9,805,851.27	9,531,757.40

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1923	1924	1925	1926
January	76,790	62,638	56,831	55,630
February	71,092	62,023	60,606	60,394
March	76,592	68,721	60,575	61,644
April	75,614	71,058	63,062	63,019
May	77,365	63,942	59,217	60,580
June	77,593	63,230	61,270	.....
July	71,879	64,208	62,639	.....
August	76,910	59,942	59,686	.....
September	72,358	62,930	62,510	.....
October	76,256	64,976	60,995	.....
November	70,762	56,282	59,350	.....
December	69,271	55,814	57,974	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1923	1924	1925	1926
January	171,067	145,518	157,889	156,056
February	164,219	148,732	160,863	159,488
March	185,487	147,098	154,591	150,239
April	170,751	147,611	151,429	152,371
May	177,102	134,997	146,995	154,537
June	173,598	143,010	149,467	.....
July	168,330	124,187	161,338	.....
August	142,776	123,120	161,730	.....
September	137,266	127,325	156,719	.....
October	134,597	123,170	146,388	.....
November	131,426	124,400	143,582	.....
December	139,909	151,392	150,162	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines, at the close of each month for the past three years:

	1924	1925	1926
January	12,907,202	11,353,276	9,859,170
February	11,844,068	11,192,924	9,579,354
March	10,906,752	11,158,297	9,438,292
April	10,922,742	11,062,082	9,806,851
May	11,335,309	11,207,562	9,531,757
June	11,544,204	11,093,796	.....
July	12,062,361	11,067,453	.....
August	12,221,676	10,971,481	.....
September	12,206,836	10,781,753	.....
October	12,664,041	11,086,850	.....
November	12,268,530	11,068,158	.....
December	11,583,680	10,458,445	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

1925—	Receipts	Shipmts.	Stocks
May	2,814 99	5 719 90	10,254 13
June	3 052 75	1 221 83	12,085.05
July	2 639 34	3 174 10	11,550.29
August	3,216 97	1,577 98	13,189.27
September	2,929 99	5 352 05	10,767.21
October	2 869 75	1 499 24	12,137.72
November	2 759 68	2 571 32	12,283.40
December	2,661.87	3,441.67	11,503.60
1926—			
January	2,990.16	1 478 35	13,015.41
February	2,580 23	2,776 19	12,819.45
March	2 754 62	1 772 77	13,841.30
April	3,137 40	4 519 68	12,459.02
May	2,933.29	2,096.35	13,295.96

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks June 1	2,839,930.90
Runs from wells	654,235.77
Other receipts	344,229.50
Regular deliveries	455,231.13
Other deliveries	418,247.09

The amount of Illinois oil run by the Tidewater Pipe Co. in May was 28,180.90 bbls. and deliveries were 43,225.78 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1925—		
May	692,671.94	568,573.62
June	700,000.46	589,535.24
July	724,481.26	564,712.19
August	673,652.38	650,649.97
September	708,434.87	510,497.61
October	708,532.00	633,482.32
November	684,556.30	488,449.19
December	665,086.99	578,978.47
1926—		
January	665,243.62	516,083.70
February	632,611.99	506,310.51
March	753,300.74	524,625.95
April	610,957.64	487,604.00
May	682,416.67	498,456.99

The Tidewater Pipe Co., Ltd., also delivered in May 314,131.72 bbls. of Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF PORTS

	ATLANTIC PORTS						GULF COAST PORTS					
Average bbls. per day—	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
February	13,111	9,464	28,214	24,393	20,107	95,289	.....	.....	.....	.....	.....	95,289
March	7,000	2,516	48,839	16,612	16,902	91,870	.....	.....	.....	.....	.....	91,870
April	10,083	6,133	28,338	13,400	22,467	88,767	.....	.....	4,700	.....	.....	93,467
May	27,065	7,903	15,387	13,462	17,742	81,549	.....	.....	4,032	.....	.....	85,671

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

	ATLANTIC PORTS						GULF COAST PORTS					
Average bbls. per day—	Baltimore	Boston	New York	Philadelphia	Others	Total	Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
February	14,643	16,071	60,107	9,464	20,750	121,035	22,321	50,350	6,286	6,714	85,671	206,706
March	28,387	15,935	81,742	16,290	34,258	176,612	19,355	44,097	7,096	5,294	75,842	252,454
April	16,200	14,000	76,832	10,633	39,333	156,000	19,200	24,900	2,000	4,433	50,533	206,533
May	12,387	12,258	75,516	11,645	21,548	133,356	12,710	45,226	1,936	5,677	65,549	198,904

GROSS PRODUCTION OF THE UNITED STATES FOR 12 MONTHS

(IN BARRELS)

		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountains	Eastern Fields	Total
June:	Month	19,288,135	13,833,970	12,602,540	3,229,440	9,200,372	1,830,965	3,754,498	3,389,000	66,127,920
	Daily average	642,938	461,099	420,085	107,648	306,672	61,032	91,816	109,000	2,204,304
July:	Month	20,411,049	14,263,565	12,337,596	3,686,675	7,835,819	1,898,178	3,129,199	3,348,000	66,910,083
	Daily average	658,421	460,115	397,984	118,925	252,768	61,231	100,942	108,000	2,158,390
August:	Month	21,005,580	14,441,040	11,936,079	3,558,087	7,450,580	1,858,543	3,250,443	3,177,000	66,677,357
	Daily average	677,599	465,480	385,022	114,777	240,341	56,727	104,853	102,484	2,150,883
September:	Month	20,062,763	14,825,040	11,264,890	3,393,270	6,457,950	1,776,570	3,235,625	3,212,000	64,228,108
	Daily average	668,759	494,168	375,496	113,109	215,265	59,219	107,854	107,067	2,140,937
October:	Month	20,015,076	14,921,199	11,196,511	3,477,146	6,409,281	1,871,820	3,394,990	3,248,000	64,534,023
	Daily average	645,648	481,329	361,178	112,166	206,751	60,382	109,500	104,774	2,081,743
November:	Month	19,095,907	14,590,980	10,650,087	3,221,760	5,927,955	1,758,882	3,088,121	2,992,000	61,325,692
	Daily average	636,530	486,366	355,003	107,397	197,599	58,629	102,937	99,753	2,044,190
December:	Month	19,249,711	14,123,848	10,930,455	3,308,816	6,047,883	1,762,966	3,187,164	3,086,900	61,698,743
	Daily average	620,959	455,608	352,595	106,736	195,093	56,902	102,812	99,552	1,990,283
January:	Month	19,069,563	13,674,813	10,880,814	3,250,536	5,489,620	1,606,952	3,136,280	3,014,000	60,123,578
	Daily average	615,147	441,123	350,994	104,856	177,084	51,835	104,396	97,226	1,939,438
February:	Month	17,163,963	12,387,620	9,689,120	2,877,812	4,756,836	1,583,904	2,769,605	2,931,000	54,159,860
	Daily average	612,999	442,415	346,040	102,779	169,887	56,568	98,914	104,678	1,934,281
March:	Month	18,825,786	14,312,886	10,974,341	3,334,887	5,115,837	1,859,946	3,151,250	3,327,000	60,931,933
	Daily average	607,283	461,706	354,011	107,577	165,027	60,966	101,653	107,323	1,965,546
April:	Month	18,091,771	14,468,190	10,778,780	3,330,120	5,127,510	1,959,570	3,231,404	3,183,000	60,170,325
	Daily average	603,059	482,273	359,292	111,004	170,917	65,319	104,239	106,100	2,005,678
May:	Month	18,667,144	14,507,008	12,182,697	3,516,640	5,482,939	1,996,338	3,459,489	3,317,000	63,129,155
	Daily average	602,166	467,968	392,987	113,440	176,869	64,398	111,596	107,000	2,036,424
	Total 12 months	230,947,048	170,249,149	135,423,792	40,185,189	75,302,582	21,795,644	37,788,072	38,224,900	750,015,777
	Daily average	633,752	466,710	371,024	110,096	206,308	59,714	103,529	104,726	2,054,838

XUM

day,

the
ields,
s. at
three

926
59.170
79,354
38.292
95.851
31,757
.....
.....
.....
.....
.....

ondi-
close
not
orted

ocks
254 13
985.05
550.29
189.27
767.21
137.62
283.40
502.60

015.41
819.46
841.20
459.02
295.80

rt of

930.90
235.77
229.50
231.13
247.09
y the
180 90
bbls.
llinois
verlies

579.62
536.24
718.19
449.97
697.61
682.33
449.19
938.47

083.76
810.51
625.95
604.00
456.90
o de-
aho.ns

Total
l Porta
95,288
91,879
98 447
85,671

Total
l Porta
206,606
352,464
206,533
198,904

Total
127,930
304,384
213,983
163,299
677,367
160,883
228,188
140,937
634,033
081,743
325,492
044,190
698,743
290,282
123,578
923,438
159,869
914,281
921,933
965,646
170,325
005,678
129,156
036,424

015,777
054,833

XUM

XUM

CONFIDENCE

When a graceful young lady, with much to live for, leaves the safety of her trapeze to hurl herself through space to the hands of a waiting partner, it may look like sheer recklessness. In reality, it is common-sense confidence—based on performance.

Performance is likewise the basis of the confidence GASO Pumps enjoy—performance exemplified by the manner in which GASOS operate year after year for many of the biggest companies in the industry: Prairie, Sinclair, Texas, Standard and Midwest, to cite just a few.

SMALL PUMPS *with* BIG IDEAS *of* DURABILITY *and* EFFICIENCY

Gaso Walking Beam Pump for Gas or Vacuum. Designed to stand world of abuse.

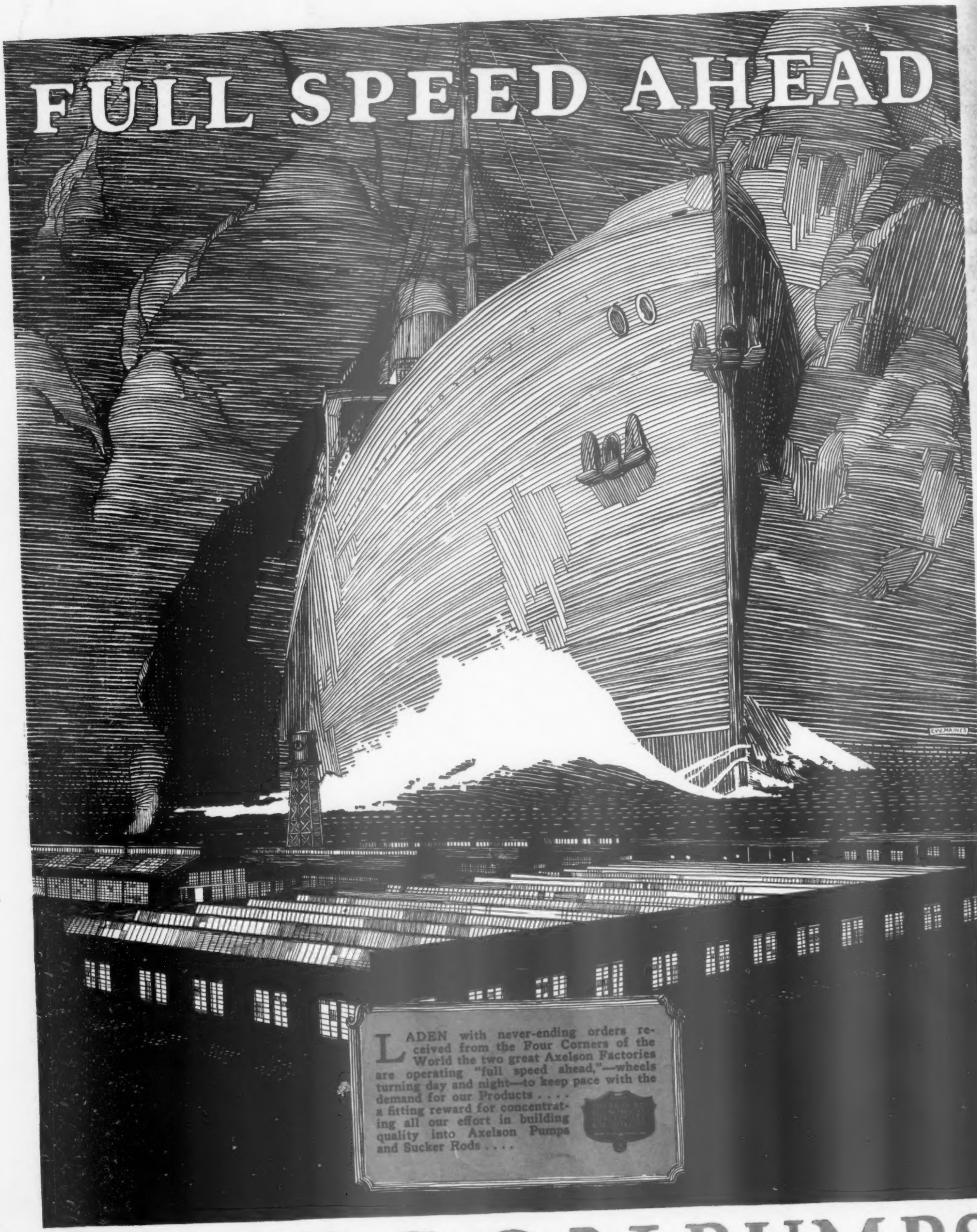
Gaso Walking Beam Pump for Oil or Water; especially adapted for use where no pumping power is available.

Gaso Rodline Pump for general service; used in connection with rod or shackle line between power and well.

GASO PUMP & BURNER MANUFACTURING CO.
TULSA. OKLAHOMA

GASO PUMPS
for every oil industry need

XUM


FULL SPEED AHEAD
LADEN with never-ending orders received from the Four Corners of the World the two great Axelson Factories are operating "full speed ahead,"—wheels turning day and night—to keep pace with the demand for our Products . . . . a fitting reward for concentrating all our effort in building quality into Axelson Pumps and Sucker Rods . . . .

AXELSON PUMPS
[WORKING BARRELS]